S2L, INCORPORATED
531 Versailles Drive, Suite 202
Maitland, Florida 32751-7301
407-475-9163 Fax 407-475-9169

RECEIVED
MAR 24 2009
DEP Central Dist.

Letter of Transmittal

To: Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Date: 3-24-09	**Project No:** 05-198.23
From: Bob Mackey, P.E.	
RE: Certification of Construction Completion Orange County Class III Landfill Cell I Landfill Gas Collection System Expansion (Hand Delivered via Courier)	

No.	Contents
2 ccs	Certification of Construction Completion Class III Cell I Landfill Gas Collection System
	Expansion Construction Project
1	CD containing pdf of same

cc: James N. Bradner, P.E. - FDEP Air Resources Management w/1 cc
James W. Flynt, Jr., P.E. - Orange County Utilities Department Solid Waste Division w/2 ccs, 1 CD

If enclosures are not as noted, please notify us at once.

ORANGE COUNTY LANDFILL

RECEIVED
MAR 2 4 2009
DEP Central Dist.

CERTIFICATION OF CONSTRUCTION COMPLETION
CLASS III CELL I LANDFILL GAS COLLECTION SYSTEM EXPANSION CONSTRUCTION PROJECT

CONSTRUCTION, ENGINEERING, AND INSPECTION SERVICES REPORT FOR THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Prepared for:

ORANGE COUNTY UTILITIES DEPARTMENT SOLID WASTE DIVISION
5901 YOUNG PINE ROAD
ORLANDO, FLORIDA 32829

Prepared by:

S2L, Incorporated
531 Versailles Drive, Suite 202
Maitland, Florida 32751

March 2009

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LIST OF APPENDICES

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion
Effective Date May 19, 1994

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: SO48-0128169-020 County: ORANGE

Name of Project: ORANGE COUNTY LANDFILL

Name of Owner: ORANGE COUNTY UTILITIES SOLID WASTE DIVISION

Name of Engineer: S2L, INCORPORATED

Type of Project: CLASS III CELL I LANDFILL GAS MANAGEMENT SYSTEM EXPANSION

Cost: Estimate $ 645,000 Actual $ 572,000

Site Design: Quantity: _____ ton/day Site Acreage: 50 Acres

Deviations from Plans and Application Approved by DEP: REFER TO SECTION 6 OF THE ATTACHED REPORT.

Address and Telephone No. of Site: 5901 YOUNG PINE ROAD, ORLANDO, FL 32829; 407-836-6600

Name(s) of Site Supervisor: MR. MARK COOLEY

Date Site inspection is requested: ASAP

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. SO48-0128169-020 :Dated: January 4, 2008

Date: March 19, 2009

Signature of Professional Engineer

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

S2Li

March 19, 2009

Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

RE: Certification of Construction Completion
Class III Cell I Landfill Gas Management System Expansion
Orange County Landfill, Orange County
FDEP Solid Waste Permit No. SO48-0128169-020

Dear Lubozynski:

On behalf of the Orange County Utilities Department Solid Waste Division (County), S2L, Incorporated (S2Li) is pleased to enclose the Construction Certification Documentation and Completion Form 62-701.900(2) for the Landfill Gas Collection System Expansion at the Orange County Landfill Facility located at 5901 Young Pine Road, Orange County, Florida. The construction was permitted under solid waste permit number SO48-0128169-020 approved by the FDEP on January 4, 2008. This landfill gas system expansion was constructed to maintain compliance with the Code of Federal Regulations, Part 60, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.

If you have any questions or comments, please advise.

Sincerely,

S2L, Incorporated

3/14/09

Robert E. Mackey, P.E.
Florida Registration No. 40176

Enclosures

cc: James N. Bradner, P.E. – FDEP Air Resources Management w/1 Enclosure
James W. Becker, Manager – Orange County Utilities Department Solid Waste Division
Dan R. Morrical, P.E. – Orange County Utilities Department Solid Waste Division
James W. Flynt, Jr., P.E. – Orange County Utilities Department Solid Waste Division w/2 Enclosures

531 VERSAILLES DRIVE, SUITE 202 ■ MAITLAND, FL 32751-7301
407-475-9163 Fax 407-475-9169 www.s2li.com

CERTIFICATION OF CONSTRUCTION COMPLETION

CLASS III CELL I LANDFILL GAS MANAGEMENT SYSTEM EXPANSION
ORANGE COUNTY LANDFILL, ORANGE COUNTY
March 10, 2009

1. INTRODUCTION

This report documents the construction of the Orange County Landfill's Class III Cell I Landfill Gas (LFG) Management System Expansion. The landfill is located at 5901 Young Pine Road, Orlando, Florida 32829. The recently completed construction included the installation of forty-one (41) gas wells/wellheads, condensate drainage lines, and associated valves and fittings. Three (3) horizontal collectors were also abandoned during this construction activity. The LFG collection system expansion has been designed and installed to maintain compliance with the Code of Federal Regulations, Part 60, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills. The facility is currently permitted by the Florida Department of Environmental Protection (FDEP) under Title V permit number 0090069-002-AV. The construction was permitted under solid waste permit number SO48-0128169-020 approved by the FDEP on January 4, 2008. The site is owned and operated by the Orange County Utilities Department Solid Waste Division. The LFG modification was designed by Waste Energy Technology (WET) Inc.; construction was performed by SCS Engineers, Inc. (SCS) and Construction, Engineering, and Inspection (CEI) Services were provided by S2L, Incorporated (S2Li).

2. CONSTRUCTION, ENGINEERING, AND INSPECTION SERVICES

CEI personnel operations and duties performed during the construction are summarized as follows:

- Monitor LFG header and lateral pipe fusing and placement and LFG extraction well construction to ensure compliance with design requirements (Field Reports are provided in Appendix A);
- Monitor the performance testing of all piping and appurtenances (Pressure Test Report Forms are provided in Appendix B);
- Review all Contractor submittals including Record Survey, Requests for Information, and Applications for Payment;
- Monitor construction activities to ensure compliance with safety requirements;
- Inspect materials delivered to the site to ensure that construction materials are materials designated by the Contractor in shop drawing submittals, and are in compliance with design requirements, arrive on site undamaged, and are stored in an appropriate manner.

3. CONTRACT DOCUMENTS

The following documents define the design and technical aspects of the LFG project and the scope of services provided by SCS:

- "Bid Documents and Contract Documents for the Class III Cell I Landfill Gas Management System Expansion" (Prepared by S2L, Incorporated and Orange County); and
- "Construction Drawings – Class III Cell I Landfill Gas Management System Expansion."

4. CONTACT LIST

The parties involved with this project are:

Owner / Operator
Orange County Utilities Department
Solid Waste Division
5901 Young Pine Road
Orlando, FL 32829
407-836-6601

Project Management/CEI Services
S2L, Incorporated
531 Versailles Drive
Suite 202
Maitland, FL 32751
407-475-9163

Contractor
SCS Engineers, Inc.
1901 Central Drive, Suite 550
Bedford, TX 76021
817-571-2288

Drilling Subcontractor
Quality Drilling Services
P.O. Box 462
Christiansburg, OH

Surveyor
John Webb & Associates Inc.
925 S. Denning Dr.
Winter Park, FL 32789
407-622-9322

Design Engineer
Waste Energy Technology, LLC
11 Tupelo Ave., S.E.
Fort Walton Beach, FL 32548
850-243-0033

5. SUMMARY OF CONSTRUCTION

Construction on the LFG Management System, Class III Cell I began on May 29, 2008 and was completed on August 26, 2008. The project included constructing and installing the following:

- 41 vertical LFG extraction wells – 2087 feet total;
- 2021-feet of 8" HDPE header pipe;
- 1687-feet of 6" HDPE lateral pipe;
- 4345-feet of 4" HDPE lateral pipe;
- 1200-feet of 2" HDPE air supply line for pneumatic pumps;
- 500-feet of condensate force main discharge pipe;

- 1 condensate knockout;
- Capping and abandoning of 3 horizontal wells.

SCS's drilling crew (subcontracted to Quality Drilling services) was on site from May 29, 2008 to June 11, 2008, during which time all forty-one (41) LFG extraction wells were drilled. The LFG extraction wells were each constructed with 6-inch schedule 80 PVC pipe in a 36-inch borehole. In accordance with the design drawings, the solid PVC pipe extended 15 to 20-feet below land surface (BLS). Approximately 3-6 feet of solid pipe was left above ground level for connection to the wellhead assembly. The screened portion of each pipe extended between 15-feet and 73-feet below the solid portion. All LFG extraction wells were backfilled with FDOT No. 4/57 non-limestone rock to at least a foot above the screened interval. A geotextile pad was placed over the rock which was then overlain by 2-feet of backfill soil, 2-feet of bentonite, and a soil backfill layer of variable depth.

All LFG header and lateral pipes were constructed using high density polyethylene (HDPE) pipe. The design required installation of 2,021-feet of 8" header pipe, 1,687-feet of 6" lateral pipe, and 4,345-feet of 4" lateral pipe in waste-filled areas at a minimum of 2% slope. All header and lateral pipes were installed using a laser, and the slope was checked intermittently.

All header and lateral pipes were pressure tested and reported in Appendix B. The header pipe, laterals, forcemain, and air supply line were tested at a pressure of at least 10 psig for an hour. No significant fluctuations were noticed in the pressure.

Photographs of construction progress were taken by SCS and S2Li. Select photographs are provided in Appendix D.

One condensate knockout sump was installed on the 8" gas header line. The location of the knockout is shown in the Record Survey in Appendix E.

The LFG Management System Expansion was completed on August 26, 2008.

6. SUMMARY OF DESIGN CHANGES

Approximately 584-feet of 8" proposed header on the Southeast corner of the cell was not constructed. The laterals tying into this section of the proposed header were extended south of the proposed header and tied into the existing header as shown in the construction drawings.

7. CONSTRUCTION RECORDS

The following construction documentation is provided in appendices:

- Appendix A: Construction, Engineering, and Inspection Field Reports;
- Appendix B: Pressure Test Report Forms;
- Appendix C: Landfill Gas Extraction Well Drilling Logs;

- Appendix D: Construction Photographs;
- Appendix E: Record Survey.

Field Reports

Daily Field Reports were maintained by CEI and SCS personnel to document the construction progress, general weather conditions, and any project issues worthy of note. The Field Reports are provided in Appendix A.

Pressure Test Report Forms

All installed HDPE pipe (headers, laterals, air supply line, and forcemain) was pressure tested for leaks. SCS used a portable air compressor to pressurize all the pipes. A pressure gauge was used for all the tests, but showed minimal fluctuation. The pressure test reports are provided in Appendix B.

Landfill Gas Extraction Well Drilling Logs

SCS's subcontractors drilled each borehole to the depths specified in the approved well driller's log. Copies of the logs provided by SCS are in Appendix C. These logs include the types of materials that were unearthed over certain intervals. Additionally, well drilling logs were recorded by SCS personnel in the daily Field Reports.

Construction Photographs

Throughout the course of the project, photographs of the construction were taken by S2Li. Select photographs are provided in Appendix D.

Record Survey

The Record Survey was created from survey information provided by John Webb & Associates Inc. The Record Survey shows the as-built locations of all piping and appurtenances installed by SCS during the project and is located in Appendix E.

8. VENDOR LIST

The following vendors supplied SCS the materials used in this project:

- *Surveyor:*
  John Webb & Associates Inc.
  925 S. Denning Dr.
  Winter Park, FL 32789
  407-622-9322

- *FDOT No. 4/57 Stone & Backfill Soil:*
  Solan Trucking
  P.O. Box 695
  Gotha, FL 34734
  407-293-7554

- *Well heads and components;*
  Sampling ports:
  CES Landtec
  P.O. Box 237
  Damascus, MD 20872
  301-391-6545

- *Pipes and Fittings:*
  ISCO Industries
  460 Fife Road
  Mulberry, FL 33860
  863-425-2227

- *Sod:*
  K&C Environmental
  415 Lanark St
  Sanford, FL 32773

APPENDIX A

CONSTRUCTION, ENGINEERING, AND INSPECTION FIELD REPORTS

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, May 29, 2008.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Tony Hunter, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714

06:30 Gautam Patwardhan (GP) at the office collecting drawing sets to take to site.
06:50 GP on way to site.
07:25 GP at site – signs in and calls Bill Routh (Orange County Inspector)
07:35 GP at Cell I – SCS crew onsite, setting up.
07:50 Dennis Adams (SCS Crew Chief) asks GP about geotextile "Donut". GP informs Dennis Adams (DA) that the geotextile needs to be placed after the #4 stone on all wells.
08:00 Art & Greg (Quality Drilling) onsite.
08:05 Art and GP discussing temperature issue. Art tells GP that the drillers don't measure temperatures unless specifically asked to do so by the contractor. It is decided to measure temperature of the trash pulled out at 10' intervals.
08:20 DA conducts Health & Safety Meeting – discusses trips & falls, insect bites, dehydration, hydrogen sulfide gas, etc. – GP adds in the traffic route pattern to be followed.
08:30 DA offsite to get temperature gun.
08:35 GP taking pictures.
08:45 List of major equipment onsite:
(a) Drill Rig AF130 (b) Front end loader New Holland LW170B
(c) Hertz Forklift (d) 2 McElroy pipe fusing machines
(e) Dump truck JCB714
08:50 GP checking 6" slotted pipe onsite. It is IPEX Xirtec 140 6" / 150 mm IPS PVC 1120 potable Sch. 80 280 psi @ 73° F / 23° C B137.3 ASTM D1785 NSF – pw Well Casing ASTM F480 NSF – wc.
GP checking 6" solid pipe onsite. It is IPEX Xirtec 140 6" / 150 mm IPS PVC 1120 potable Sch. 80 280 psi @ 73° F / 23° C B137.3 ASTM D1785 NSF – pw Well Casing ASTM F480 NSF – wc.
09:05 Bill Routh (BR) onsite.
09:10 **Crew starts drilling W-135.**

09:15 GP talks to BR about SCS' intent to use electro fusion couplings on the job to connect new laterals to the existing header line. BR tells GP that he will talk to Jim Flynt (JF) and let GP know. BR off site.
09:25 DA back with temperature gun.
09:27 BR calls GP – informs GP that as per his discussion with JF, electro fusion couplings are to be used for repairs only. Rest to be flanges.
09:50 GP talks to DA about weekend scheduling. DA says they plan on working over the weekend for 8 hours a day, including Sunday. GP says ok but asks DA to check with the County first.
10:05 GP asks DA about the crew onsite. The crew is:
Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Tony Hunter, Joel Sanchez (all SCS Field Services). Art and Greg (Quality Drillers)
10:15 Approximately 25' drilled on W-135.
10:30 Dump truck off to dump load.
10:45 Dump truck back on hill.
10:55 Backfill soil onsite.
11:15 JF & BR onsite. GP & DA talk to them about working on Saturday & Sunday. Also talked about drilling a well partially and covering the hole with a grate and bucket at the end of the day. The County agreed.
11:25 JF & BR off site.
11:37 Measured hole with tape measure. W-135 at 65'
11:55 Dump truck off to dump load.
12:10 Dump truck back onsite.
13:00 Dump truck off to dump load.
13:15 Dump truck back.
14:20 Measured hole with tape measure. W-135 at 74'
14:25 GP gives DA more approved shop drawings.
15:00 W-135 at 82'. **Done drilling W-135.**
15:15 Filling hole with #4 stone.
15:20 Rig moving to W-140.
15:45 Stone at 19' from grade.
16:00 Put a geotextile "Donut" over the stone. Adding 2' of backfill soil.
16:05 Adding 2' of bentonite seal. Bentonite seal at 15' from grade.
16:15 Adding backfill soil till grade.
16:16 BR onsite.
16:20 Discuss electro fusion coupling issue again with BR. DA explains the difficulties in going with the flange connections. He says that the electro fusion couplings would be a lot easier to make the connection. BR informs GP that the County would not have a problem with using electro fusion couplings provided certain conditions are met. GP informs BR that he will send out an email explaining this in detail.
16:30 BR off site. GP gave BR approved shop drawings before he left.
16:35 **GP on W-140.** Crew started drilling well W-140 at 1600 hours.
17:15 Crew stops drilling for the day. 24' drilled on W-140.
17:20 Art asks GP if they can have an early start tomorrow – decide on 0630 hours.

17:35 GP calls BR and infor ms him that the crew is off site. Also told BR that he could not sign out s the doors to the administrative building were locked.
18:0 GP back home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, May 30, 2008.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Tony Hunter, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:30 Gautam Patwardhan (GP) at the office sending emails, printing approved well schedule for driller and crew.
06:00 GP on way to site.
06:30 GP at site – signs in and calls Bill Routh (Orange County Inspector)
06:40 GP at Cell I – Art & Greg (Drillers) onsite, Desso Hore (SCS) onsite.
06:50 Art starts drilling well W-140. W-140 was 24' deep yesterday evening.
07:20 Rest of SCS crew in. Crew is the same as yesterday. SCS will get in an excavator today. Rest of the equipment is the same.
08:00 Art continues drilling. Dump truck offsite to drop off second load for the day.
08:15 GP walks over to SCS crew who are fusing 4" & 2" HDPE pipe. GP asks Josh Adams (JA) the procedure to fuse pipe. JA explains that they heat the pipe under no pressure after shaving the edges to get a uniform seal. Once the pipe is heated, they fuse them together @ 100 psi (4" pipe) or the recommended pressure for other diameter pipes.
08:40 GP talking to Chris and Dusty near W-140. they are gluing pipe. GP checks the length of the glued pipe. It is 69' slotted plus 24' solid. The solid includes a 4' stickup.
09:00 GP talking to Dennis Adams (DA). DA informs GP that they need about 550 tons of #4 stone for this job. They had ordered 200 tons and were thinking of buying another 200 tons from Terra (contractor). The 200 tons of stone from Terra is already onsite and had been checked and used on a County job a few months back. DA also tells GP that he already spoke to the County about this arrangement and they were OK with it. GP asks DA to send him an email or other formal correspondence stating the same. DA agrees to do so.
09:25 Measured W-140 with tape measure – 76'
09:45 Measured W-140 with tape measure – 83'. Drilling is taking place at a brisk rate. Most of the trash is decomposed with no big metal pieces.
09:55 Measured W-140 with tape measure – 86'
10:05 Measured W-140 with tape measure – 89'
10:06 Dump truck leaving to dump load.
10:20 Dump truck back.

10:25 Jason (SCS Field Tech) onsite.
10:30 Crew filling W-140 with #4 stone.
10:31 Drill moving to W-141. Stone at 60' from grade.
10:36 filled hole with more stone. Stone at 31' from grade.
10:38 DA informs GP that they hauled 5 loads of trash for each well i.e. W-135 & W-140.
10:40 Drill rig being refueled.
10:45 #4 stone up to 19' from grade. Needed ~ 20 cu.yd for 70'.
10:55 put geotextile "donut" over stone. Added backfill soil on top. Soil at 16' from grade.
11:00 Adding bentonite plug. Added 14 bags in total – at 14' from grade.
11:20 **W-140 complete.** Added backfill soil till grade.
11:30 **Art starts drilling on W-141.**
11:45 SCS crew out to lunch. Art continues drilling.
13:05 Bill Routh (BR) calls. GP updates him about project status. BR says he would come up later.
13:15 SCS crew gluing pipe for W-141. Glued 51' slotted & 24' solid (includes 4' stickup).
14:05 W-141 measured – 66'
14:25 W-141 measured – 71'
14:30 Spoke with Jim Getting (JG). JG informs GP that he has 16 more wells approved for drilling and that he sent GP an email with the latest well schedule.
14:35 BR onsite. Place 14 cu.yd of #4 stone in the hole for W-141.
15:00 **Finished W-141** - #4 stone at 17' from grade, followed by a geotextile "donut", 2' backfill, 2' bentonite plug and then backfill up to grade.
15:05 GP, DA, & BR discussing issues like reports, dailies, and payment schedule. **Art starts on W-139.**
15:25 GP at W-139.
15:45 SCS crew gluing pipe for W-139. GP checks the length of the pipe. It is 59' slotted plus 24' solid, including the 4' stickup.
16:00 DA offsite.
16:45 W-139 @ 51'
17:15 Crew done for the day. W-139 at 63' – will continue tomorrow at 07:00.
17:30 GP call BR – informs him that crew is offsite and leaves for the day.
18:30 GP at home.

<u>NOTE:</u> All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Saturday, May 30, 2008.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Tony Hunter, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:15 Gautam Patwardhan (GP) and Jarod Thomas (JT) meet at the apartments and leave for the site.

07:00 GP & JT onsite – try to sign in. the doors to the administrative building are closed. GP calls Bill Routh (BR) to inform him that GP and JT are onsite.

07:10 Art (Quality Drillers) starts drilling @ W-139. He had left at 63' yesterday. Art hits something hard at 71' and breaks two or three shanks on the drill rig. He tries to drill through for 10 minutes but is unsuccessful. He is reluctant to drill any further as he is afraid of breaking more shanks on the drill rig which would set the crew back by a day. GP calls Jim Getting (JG) on his cell and gets his permission to set the well at 71'. JG approves.

08:30 GP gives Dennis Adams (DA) a hard copy of the approved wells as of May 30th, 2008. GP had given Art a copy at 07:10.

08:35 Crew has #4 stone up to 18.5' from grade. Inserting geotextile 'donut'.

08:50 Crew added 2' of backfill soil on top of geotextile followed by 2' of bentonite plug. Crew then filled the borehole with backfill soil up to grade. **W-139 complete and set.**

09:00 **Art starts drilling W-138.**

09:02 GP checking on the pipe welding.

09:05 GP checking 4" HDPE pipe. It is JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714

09:10 GP checking 6" HDPE pipe. It is JM Eagle 6" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714

09:15 GP checking 8" HDPE pipe. It is JM Eagle 8" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714

09:20 GP checking 2" HDPE pipe. It is JM Eagle 2" IPS SDR11 PC16C PE3608 PE3408 345464C ASTM D3035

10:20 JT checking assembly of gas well – 72' slotted pipe plus 24' solid pipe, including 4' stickup. Checking 6" Coupling (Union) – IPEX PVC-I Sch.80. Checking 6" Cap – IPEX Sch.80

11:05 SCS crew breaks for lunch. The drillers continue drilling. They still have a long way to go therefore; GP calls BR and informs him that they are leaving for lunch as well.

11:15 GP and JT drive over to BR's office and hand deliver copy of approved well schedule as of May 30th, 2008 to BR.
11:30 GP and JT offsite for lunch.
11:35 GP gets a call from Bob Mackey (BM). GP updates BM on the progress.
12:45 GP and JT return onsite.
13:20 W-138 at 92'. Added #4 stone to the borehole up to 18.5' from grade.
13:40 Crew inserting geotextile 'donut'.
13:45 **Art starts drilling on W-137.**
14:00 Crew adding 2' of backfill soil to the borehole.
14:15 Crew adding 2' bentonite to the borehole.
14:30 Crew backfilling W-138 with backfill soil to grade. **W-138 complete and set.**
14:40 GP asks Desso Hore (DH) about number of loads hauled. DH informs GP that they hauled 5 loads on the 29th, 11 on the 30th, and 7 on the 31st. GP tells DH and DA that yesterday they provided information per well and today they provided information per day. GP asks them to stick to one format.
15:15 Drilling stopped for the day at W-137 @ 53'
15:30 GP calls BR and informs him that the crew is leaving. GP and JT offsite.
16:30 GP & JT at the office.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Sunday, June 01, 2008.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Tony Hunter, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:15 Jarod Thomas (JT) leaves apartments for site.
06:50 JT arrives at the landfill – Calls Bill Routh (BR) to inform him that S2li is onsite.
06:55 JT on Cell 1, Desso Hore onsite, rest of the crew not onsite yet, waiting on crew – taking pictures.
07:10 Quality Drillers (Art & Greg) arrive onsite.
07:15 Art resumes drilling.
07:25 JT calls Dennis Adams (DA) to confirm SCS's estimated time of arrival.
07:30 Part of SCS crew onsite – Josh Adams, Tony Hunter, Dennis Adams, Ted
07:40 Rest of SCS crew onsite.
08:05 Received a call from BR, informed him about late start but things are going well now.
08:15 Observed assembly of pipes for W-137.
- 3 X 20' slotted pipe.
- 1 X 13' slotted pipe.
- 1 X 20' solid pipe with 4' riser.

The riser is connected with a union because of fit problems.
All pipes noted as being Xirtec 140 6" Sch.80. Cap is 6" Sch. 40.
08:50 Drilling continues. Depth @ 88'.
09:10 Refusal at 88' – drill is losing teeth – called Jim Getting – left him a voicemail about refusal. Called Bob Mackey (BM) – BM gave go ahead to set the well. Called JG and left him a message saying well would be set at 88'. Done drilling at W-137.
09:15 Gave SCS crew go ahead to set the well at 88'.
09:25 Setting Well W-137. It is 88' deep. Added # 4 stone up to 18' from grade. Added geonet followed by 2' backfill soil, 2' of bentonite, & filled borehole to grade with backfill soil. **W-137 set and complete.**
09:35 **Art starts on W-136.**
10:30 Observed assembly of gas well W-136
- 55' slotted pipe
- 20' solid pipe

Pipe is the same as used in previous wells (Xirtec 140)
11:00 Art continues to drill.

11:10 SCS crew leaving for lunch. Art to continue.
11:15 Called BR to inform him on progress and that JT is leaving for lunch.
11:25 Left landfill for lunch.
12:25 Returned from lunch. Driller within 3' of 75'.
12:40 Observed remaining assembly of gas well. Driller has reached 75'.
12:50 Depth of well appears greater than 75' – gas well assembly is approximately 2' below grade.
12:55 Well is being held at correct elevation during filling. Filled borehole to 19' from grade with #4 stone. Added geonet followed by 2' of backfill soil, 2' bentonite, and fill to grade with backfill soil. **W-136 complete and set.**
13:10 **Art starts on W-123.**
13:30 JT taking pictures. Crew cleaning up trash around well W-136.
14:35 backhoe malfunction. JT concerned about waste being left overnight. JT calls BM and leaves message about problem. JT calls JG; JG does not want waste to be left overnight but deferred to BR's decision.
14:50 JT called a stop to drilling. Called BR; BR does not want trash left overnight. JT asked about using front end loader to pick up trash; slope is too steep to use the loader.
14:55 Backhoe operating at a slow pace. Drilling stopped for the day, backhoe will be used to clean up trash.
15:00 Called BR to inform him that the loader is working at a slow pace. New loader will arrive tomorrow.
15:15 BM returned call; updated BM about progress since last call.
Trash hauled from W-137 – 5 loads.
Trash hauled from W-136 – 5 loads.
15:55 Crew completed waste cleanup. Crew leaving site. JT calls BR to inform him that works done for the day. JT leaving site.
16:30 JT back home.

NOTE: All wells drilled and set today were 6" wells.
Above Daily is as reported by Jarod Thomas. Typed by Gautam Patwardhan.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, June 02, 2008.
Temperature:96° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Tony Hunter, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:30 Gautam Patwardhan (GP) on his way to site.
07:05 GP calls Dennis Adams (DA) to inform him that he will be onsite around 0715 hours. DA is also running a little late as he had a flat tire.
07:15 GP onsite. Drillers already onsite.
07:25 GP calls BR. DA gets in.
07:30 DA conducts Health & Safety meeting.
07:45 Drilling begins on W-123. GP assumes the depth of borehole to be around 45'.
08:00 GP discussing stone issue with DA. Informs DA that he has emailed Bob Mackey (BM) & Jim Getting (JG) and is waiting for their approval.
08:20 GP gets a call from BM. Discusses stone issue and gets approval from BM. GP also informs BM that he would go and check the stone himself.
08:40 GP inspecting stone. The stone seems to be the right gradation.
09:20 GP informs DA to go ahead & use stone.
10:00 W-123 @ 75'. Completing well. Filled borehole with #4 stone 16' from grade. Added geonet "donut" followed by 2' backfill soil, 2' bentonite, & backfill the rest with backfill soil to grade. **W-123 set & complete.**
10:30 **Art starts drilling on W-124.** W-124 is supposed to be 33'.
11:30 Trash around the well is a little loose and is falling in as the well is being drilled. Art continues to drill. GP checks the pipe for the well. It is 26' solid (includes a 6' stick up) and 13' slotted.
12:00 Crew at 33' on W-124. Filled borehole with #4 stone to 18.5' from grade.
12:15 Added geonet "donut" followed by 2' of backfill soil, & 2' bentonite. **Art starts drilling on W-125.**
12:30 Filled rest of the borehole to grade with backfill soil. **W-124 set & complete.**
12:45 SCS crew out for lunch.
13:30 W-125 is supposed to be 38'. GP checks pipe for the well. It is 25' solid including a 5' stickup and 18' slotted.
13:45 Art done drilling at W-125.
14:00 **Art starts on W-126.** Crew adds #4 stone @ 18' from grade to W-125.
14:02 Bob Mackey (BM) onsite.
14:15 BM offsite.

14:20 Crew adds 2' of backfill soil to W-125 after putting in the geonet. Adding 2' of bentonite.
14:30 Crew backfilling W-125 to grade with backfill soil. **W-125 set & complete.**
14:45 Crew hauling trash from the vicinity of well W-125.
15:15 Art continues drilling on W-126. GP checks the pipe needed for W-126. It is 26' solid, including a 6' stickup and 31' slotted. Total well depth is 51'.
15:45 Art done drilling at W-126 @ 51'.
16:00 Inserting slotted pipe in the well.
16:30 Setting W-126. **Art starts drilling on W-127.**
16:35 Bill Routh (BR) onsite.
16:45 #4 stone added @ 17' from the top. Added geonet "donut" followed by 2' of backfill soil. Added 2' bentonite and filled borehole to top with backfill soil. **W-126 set & complete.**
16:50 BR offsite.
17:10 Art stops drilling for the day. W-127 @ 20'.
17:15 Crew looking for wooden plank to cover borehole.
17:20 Dusty Adams filling dump truck with trash from W-127.
17:25 DA cleaning the slopes around W-127.
17:30 GP on way to BR's office to pick up laptop. Meets with BR and checks out for the day.
17:45 Crew offsite.
17:50 GP offsite.
1 8:35 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, June 03, 2008.
Temperature:95° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs, Desso Hore, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:30 Gautam Patwardhan (GP) on his way to site.
07:10 GP onsite. Some of the SCS crew is onsite.
07:20 GP calls Bill Routh – informs him that S2li is onsite.
07:25 Rest of SCS crew onsite.
07:30 Drillers not onsite yet.
07:40 Drillers onsite.
08:00 Crew filling up dump truck. Art starts drilling at W-127. W-127 was 20' deep last evening.
08:25 Crew takes dump truck offsite (off Cell I) to dump load.
08:40 Dump truck back.
08:45 Art had some trouble with the drill rig yesterday evening. The cable that attaches to the Kelley go snagged in between the tensioner and the pulley and got cut halfway through its thickness.
08:50 Art done drilling at W-127 @ 51'.
09:00 Crew setting up W-127. Art moves on to W-128.
09:05 GP checking pipe. It is 24' solid which includes a 4' stickup and 31'slotted.
09:15 Crew having a hard time getting the stone to the well. Slope is steep and most of the mulch is too soft. Heavy equipment not getting traction. **Art starts on W-128.**
09:30 Crew able to get loader to the well after compacting and grading the slope a little.
09:35 Hertz rental onsite to pickup forklift.
09:50 Hertz rental offsite.
09:55 #4 stone added @ 18' from grade on W-127.
10:00 Inserted geonet "donut".
10:05 Added 2' of backfill soil.
10:15 Added 2' of bentonite and backfilled to grade with backfill soil. **W-127 set & complete.**
10:30 Crew loading dump truck near W-127.
10:40 Dump truck off to dump load.
10:50 Jason (SCS Field Tech) onsite. DA has been offsite for sometime. GP learns he is on his way to Daytona.
11:00 Art done drilling at W-128 @ 52'. GP checks the pipe. It is 32' slotted and 27' solid which includes a 7' stickup.

11:15 Adding #4 stone to the borehole.
11:25 GP gets a call from Bob Mackey to check on progress.
11:30 #4 stone @ 17' from grade.
11:35 Crew inserting geonet "donut".
11:45 Adding 2' of backfill soil – went a little over – approximately 3' added.
11:50 Added 2' of bentonite.
12:00 Crew backfills W-128 to grade with backfill soil. **W-128 set & complete.** Crew grading slopes around W-128. Tony Hunter not onsite today. Rest of the crew is the same. Crew breaks for lunch. DA continues to grade. Art & Greg at lunch
12:30 DA done grading around W-128.
12:45 **Art starts on W-129.**
13:30 Crew filling dump truck with trash.
.13:40 Thunderstorms are expected in the area around 1500 hours. GP checks pipe for W-129. It is 30' slotted and 24' solid, including a 4' stickup.
14:00 GP talking to DA. DA back onsite. GP discusses restaking wells W-120, W-121, & W-122 & status of the header layout survey. GP informs DA that S2li would need the location of the header tie ins staked before S2li & WET can give approvals for the rest of the wells. DA asks GP if they need ground elevations at the tie ins or they need actual elevation at the top of pipe. GP says he will double check with JG. GP & DA go look at W-120, W-121, & W-122. the wells are in the middle of the road but the stakes have already been offset to the side. The elevation change seems to be minimal. GP gives DA a copy of the email from Bob Mackey. DA informs GP that surveyors would be onsite to stake wells and rest of the header layout on Thursday.
14:15 BR onsite. Art done drilling W-129.
14:20 Crew inserting pipe in borehole. Pipe is 30' slotted and 24' solid, including the 4' stickup.
14:25 Art moving to W-130.
14:30 Crew putting #4 stone in the borehole. Stone is 18' from the top. Adding geonet.
14:40 added 2' of backfill soil layer. Added 2' of bentonite. **Art starts drilling W-130.**
14:45 Crew backfilling borehole to grade with backfill soil. Also, loading dump truck with trash.
15:00 Crew done backfilling W-129. **W-129 set and complete.**
15:10 GP at W-13- checking pipe. It is 21' solid, including 6' stickup and 18' slotted. BR offsite.
15:20 Crew grading around W-129. part of the crew is hauling trash around W-130.
15:40 Art done drilling W-130.
15:41 GP calls JG and asks about header stakeout. DA needs to know if JG needs ground or top of pipe elevations.
15:50 GP and JG decide to have a teleconference to discuss survey and other issues on Thursday @ 0800 EST. GP calls DA and lets him know.
16:00 Added #4 stone @ 14' from grade.
16:05 **Art starts drilling W-117.**
16:10 Inserted geonet and added 2' of backfill soil.
16:15 Added 2' of bentonite and filled borehole to grade with backfill soil.

16:17 BR calls. GP had called earlier. GP & BR discuss header survey issue. GP asks BR if any room would be available on Thursday for a brief teleconference. BR says GP can use the conference room in the field office.
16:35 Crew done grading around W-130. **W-130 set & complete.** All trash has been hauled and the area around W-130 has been cleaned up.
17:00 Crew hauling trash around W-117. GP checks pipe. It is 66' slotted and 24' solid, including the 4' stickup.
17:10 Drillers done for the day. W-117 is @ 43' deep.
17:20 Crew cleaning up and hauling trash.
17:30 Crew offsite.
17:35 GP calls and checks out with BR. GP offsite.
18:15 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, June 04, 2008.
Temperature:93° F, Hot, Humid, & Clear.

Crew: Desso Hore, Joel Sanchez (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:00 Gautam Patwardhan (GP) working on shop drawing submittal log. Sends email to Bill Routh (BR) updating him on project status and informing him that GP would be onsite at 0800 hours.
08:00 GP onsite. SCS crew and the driller's onsite since 07:30 am.
08:00 GP calls BR and informs him that he is onsite.
08:15 SCS in today with a 2 man crew. The remaining are attending Health & Safety training and might be onsite later in the afternoon.
08:30 Art continues to drill.
08:45 SCS crew hauling trash.
09:10 Art done drilling @ W-117. It is at 86'. Jim Flynt (JF) onsite – talking to GP.
09:15 JF offsite.
09:30 Crew setting pipe in W-117.
09:45 Crew fills hole with #4 stone @ 56' from top.
10:00 Crew building pad for the drillers near W-116.
10:15 Added more #4 stone to borehole. Stone is @ 28' from the top.
10:30 **Art starts drilling on W-116.**
10:45 Added #4 stone in the borehole. It is @ 15' from the top. Added geonet, and 2' backfill soil.
11:00 Added 2' bentonite in the borehole and backfilled borehole to grade with backfill soil. **W-117 set & complete.**
11:15 Art continues drilling at W-116.
11:30 Crew cleaning up and hauling trash.
12:00 Art breaks for lunch. Art will also be going to the South end of town to get a cable for his rig. SCS crew also breaks for lunch.
12:30 Crew starts gluing pipe. GP checks pipe for W-116. It is 77' plus a 4' riser: total 24' solid and 57' slotted.
12:45 Crew hauling pipe towards W-116.
14:00 Drillers not onsite yet.
15:00 GP gets a call from Dennis Adams (DA). DA informs GP that the drillers called him and said they won't be drilling anymore today.

15:05 GP leaves BR's office and gets to Cell 1. GP speaks with the drillers. Art tells GP that he had trouble procuring parts for the rig and had to wait at the suppliers shop.
15:15 Drillers looking for a misplaced O-ring for their rig.
15:30 Drillers and SCS crew offsite.
16:00 GP sending out emails and shop drawing log.
16:30 GP offsite.
17:30 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, June 05, 2008.
Temperature:93° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite – calls Bill Routh (BR) and leaves him a voicemail.
07:20 GP talking to Dennis Adams (DA).
07:30 SCS crew onsite. Joel and Desso are not with the crew as of today. Drillers not onsite yet.
08:00 GP, DA, and BR on conference call with Jim Getting (JG). Discuss header survey, shop drawing submittals, wells to be field staked (W-120, 121, & 122). JG also needs ground elevations at the point of the proposed tie in to existing header to give his approval to drill the shallow wells. The electro fusion coupling issue is also discussed.
08:45 Drillers onsite. They had to go to the suppliers to get an O-ring for the drill rig.
09:00 **Art starts drilling on well W-116.** Surveyor's onsite (Webb & Associates).
09:30 Crew hauling trash, cleaning around W-116.
10:00 GP in BR's office – sending emails, minutes of meeting etc.
10:30 GP on top of hill, talking to Dennis.
11:40 Art @ 77' on Well W-117.
11:50 Crew inserting pipe in the borehole.
12:00 Adding #4 stone to the borehole. Stone @ 50' from top. **Art has started drilling at W-118.**
12:15 Adding #4 stone to the borehole. Stone @ 21' from top.
12:20 Adding #4 stone to the borehole. Stone @ 17' from top.
12:25 Adding geonet followed by 2' backfill soil.
12:35 Adding 2' of bentonite. Backfill to grade with backfill soil.
12:40 **W-116 set & complete.**
12:45 SCS crew cleaning up around W-116.
13:00 Crew breaks for lunch. Art continues drilling.
13:45 Crew hauling trash.
14:00 Slight drizzle onsite. No thunder or lightening yet.
14:15 GP talking to Seth from the surveyor's crew. Seth informs GP that the survey is progressing well and that they have 2 of the 3 wells staked already.
14:45 Art greasing the Kelly on the rig. He is on something hard @ 60' from top on W-118 and the Kelly was sparking a little.

15:00 Art seems to have broken through the refusal. It was probably wood.
15:15 Crew hauling trash.
15:30 Art done drilling W-118 @ 77' from the top. GP checking the pipe for the well. It is 24' solid and 57' slotted.
15:40 Adding #4 stone in the borehole. It is 48' from the top.
15:45 **Art starts drilling on W-119.**
15:50 #4 stone added. It is at 22' from top. Need half a bucket more.
16:00 #4 stone added @ 17' from the top. Added geonet followed by 2' backfill soil and the 2' bentonite seal. **W-118 set & complete.**
16:30 Crew hauling trash.
17:10 Crew winding up for the day. W-119 is 49' deep.
17:20 Crew offsite.
18:00 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, June 06, 2008.
Temperature:93° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:00 Gautam Patwardhan (GP) leaves for site.
06:45 GP calls Bill Routh (BR) – informs him that he is onsite.
06:50 GP and the drillers are onsite.
06:55 Art starts drilling on Well W-119. it was @ 49' yesterday.
07:05 Josh Adams (JA) onsite.
07:15 Rest of SCS crew onsite.
07:40 Crew hauling trash.
08:05 Art done @ 66' on W-119.
08:10 GP calls Jim Getting (JG) to check on approvals for wells W-120, W-121, and W-122 – leaves him a voicemail.
08:15 Art moving to W-120.
08:20 **Art starts drilling W-120.**
08:30 Adding #4 stone to the borehole. Stone @ 16' from top. Crew inserting the geonet. GP had checked the pipe before it was placed in the borehole. It was 24' solid, including a 4' riser and 46' slotted.
08:40 Adding 2' of backfill soil followed by 2' of bentonite seal.
08:45 Filled borehole with backfill soil to grade. **W-119 set & complete.**
09:15 Crew hauling trash.
09:20 GP at BR's office – sending emails.
09:30 GP calling Bob Mackey (BM) updating him on project status.
09:40 GP discussing scheduling with BR. BR informs GP that S2li needs to be onsite the 16th through the 20th as he will be in a class.
10:00 GP talking to Jim Getting (JG) – informs him that more wells need to be approved by Monday.
10:15 GP back up the hill. Crew hauling trash.
10:30 GP checks pipe for W-120. It is 24' solid including a 4' riser and 47' slotted.
10:35 Art @ 67' on W-120.
10:45 Art moving to W-121.
10:50 **Art starts drilling W-121.** Adding #4 stone to W-120. it is @ 38' from the top.
11:00 Adding #4 stone to the borehole. Stone @ 17' from top.
11:10 Adding geonet, 2' backfill soil, and 2' bentonite plug.
11:15 Backfilling W-120 to grade with backfill soil. **W-120 set & complete.**

11:25 Crew loading trash.
11:45 Crew out for lunch.
12:45 Crew back onsite.
13:00 Crew hauling trash.
13:30 Art continues to drill on W-121.
13:35 GP gets a call from Sandeep; discussing scheduling for next week.
14:00 GP discussing new well schedule with DA – tells DA that it is not approved yet.
14:20 Art done drilling at W-121 @ 66'. GP checking pipe. It is 24' solid which includes a 4' riser, and 46' slotted.
14:30 Art moving to W-122.
14:40 Adding #4 stone to the borehole. Stone @ 40' from top.
14:45 **Art starts drilling at W-122.**
15:00 Adding #4 stone to the borehole. Stone @ 17.5' from top. Adding geonet.
15:05 Adding 2' backfill soil followed by 2' bentonite plug.
15:10 Backfilling borehole to grade with backfill soil.
15:20 **W-121 set & complete.**
15:30 Crew hauling trash and cleaning up around W-121.
16:10 Art done drilling at W-122 @ 55'.
16:15 Bob Mackey (BM) onsite.
16:20 GP, BM, & DA discussing scheduling/approval. Still have 5 approved wells to drill but crew is short on stone. If they drill the 5 deep wells tomorrow, they won't have any rock to drill on Monday. A fresh load of rock is coming in on Tuesday. BM goes to talk to BR.
16:25 Drillers offsite.
16:30 Adding #4 stone to the borehole. Stone @ 27' from top.
16:45 Adding #4 stone to the borehole. Stone @ 17' from top.
16:50 Added geonet & 2' backfill soil.
17:00 Crew adding 2' bentonite seal. Crew filling borehole to grade with backfill soil. **W-122 set & complete.**
17:05 BM, GP, & JG on the phone discussing well approval. JG gives approval to drill Wells W-101 through W-105 with 6' risers.
17:10 BM offsite.
17:15 Crew cleaning up, hauling trash around W-122.
17:30 Crew offsite.
17:35 GP talking to BR.
17:45 GP offsite.
18:30 GP home.

<u>NOTE:</u> All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Saturday, June 07, 2008.
Temperature:93° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

05:00 Gautam Patwardhan (GP) at the office.
05:15 GP goes over the well schedule – sends email regarding approvals for wells W-101 through W-105.
05:30 GP working on new well schedule.
05:45 GP emails new well schedule.
06:00 GP making copies.
06:15 GP leaves for site.
07:00 GP and the drillers onsite. GP calls Bill Routh (BR) and leaves him a voicemail.
07:10 Dennis Adams (DA) onsite.
07:20 DA building a pad for the drillers on Well W-105. Rest of the crew onsite.
07:30 GP informs DA that wells W-101 through W-105 have been approved – hands new well schedule to the crew and the drillers.
07:45 Crew gluing pipe.
08:05 **Art starts drilling on Well W-105.**
08:25 GP checking pipe for wells W-101 through W-105.
08:35 Well W-101 total 23' (15' solid and 8' slotted) with an extra 6' solid riser.
08:40 Well W-102 total 23' (15' solid and 8' slotted) with an extra 6' solid riser.
08:45 Well W-103 total 26' (15' solid and 11' slotted) with an extra 6' solid riser.
08:50 Well W-104 total 26' (15' solid and 11' slotted) with an extra 6' solid riser.
08:55 Well W-105 total 27' (15' solid and 12' slotted) with an extra 6' solid riser.
09:10 Art @ 27' on W-101.
09:25 **Art starts on Well W-104.**
09:30 DA taking pictures.
09:35 #4 stone at 13' from surface at W-105.
09:45 Added the geonet and 2' of backfill soil.
09:50 Add 2' of bentonite plug.
09:55 Backfilled borehole with backfill soil to grade. **W-105 set & complete.**
10:00 Crew filling dump truck with trash.
10:15 Art done drilling well W-104 @ 26' from the surface.
10:20 Moving to W-103.
10:30 **Art starts drilling on W-103.** #4 stone at 12.5' from top at W-104.
10:35 Added geonet and 2' of backfill soil.

10:40 Added 2' of bentonite plug.
10:45 Crew loading dump truck with trash at W-104.
10:50 Crew hauling trash at W-104.
10:55 Backfill borehole with backfill soil to grade. **W-104 set & complete.**
11:15 Art at 26' from top on W-103.
11:20 Art moving to Well W-102.
11:30 Art starts drilling at W-102.
11:35 #4 stone added till 13' from top at W-103.
11:40 Geonet added.
11:45 Added 2' of backfill soil.
11:50 Added 2' of bentonite plug. Backfilling borehole to grade with backfill soil.
12:00 Cleaning up around W-103. **W-103 set & complete.**
12:10 Art done drilling at W-102. Moving to W-101.
12:20 Crew bring pipe for W-102 & W-101.
12:30 Jason Beaver (SCS Field Tech.) onsite.
12:35 Setting pipe at W-102.
12:40 #4 stone added @ 13' from top to well W-102.
12:50 Added geonet. Added 2' of backfill soil.
12:55 Art done drilling at W-101. He is at 23' from ground elevation.
13:00 Added 2' of bentonite plug at W-102.
13:05 Backfill W-102 to grade with backfill soil. **W-102 set & complete.**
13:15 Added #4 stone @ 13' from grade at W-101.
13:20 Added geonet followed by 2' of backfill soil.
13:25 Added 2' of bentonite plug. Backfill to grade with backfill soil.
13:30 Crew loading trash at W-102. DA offsite.
13:40 Adding more backfill soil to W-101. **W-101 set & complete to grade.**
13:50 Crew still needs to haul some trash around the wells. They had a hard time staying with the drillers as the drillers were drilling the shallow wells at a brisk pace. GP assuming the drillers left site @ 13:15.
14:00 Crew picking up trash around W-101.
14:15 Crew picking up trash around W-102.
14:30 Crew picking up trash around W-103.
14:45 Crew picking up trash around W-104.
15:00 Crew done for the day. Crew offsite.
15:15 GP calls BR and leaves site.
1600 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, June 09, 2008.
Temperature:92° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

03:30 Gautam Patwardhan (GP) on his way to the office.
03:45 GP sending out emails.
04:00 GP checking driller logs.
04:30 GP typing dailies (Typed 06/01 & 06/02).
06:10 GP on way to site.
07:10 GP calls Bill Routh (BR) and leaves him a voicemail.
07:15 Dennis Adams (DA) calls GP – asks about drilling shallow wells. GP asks him to wait for approval.
07:20 GP on Cell 1 – talking to DA & Art. GP tells them that he would send Jim Getting (JG) an email asking for approval – suggests that Art can start on W-114 & W-115 and grate and cover them. GP tells them that he expects to hear from JG shortly.
07:40 GP at BR's office sending email to JG.
08:00 **Art starts drilling on Well W-114.**
08:30 GP back on Cell 1.
08:35 Crew hauling trash.
08:45 Crew has pipe assembled and glued for wells W-114 & W-115. GP checking pipe. W-114 is a total of 24' solid (includes a 4' riser) and 29' slotted. W-115 is a total of 24' solid (includes a 4' riser) and 34' slotted.
09:00 Art continues drilling.
09:20 GP calls JG and leaves him a voicemail regarding well approval.
09:30 Art done drilling at W-114 @ 49'.
09:45 Crew inserts 49' pipe (20' solid and 29' slotted) in the borehole. They leave an additional 4' out of the ground (riser).
09:50 Crew filling dump truck with trash. Art moving to W-115. W-114 will be covered with a grate for now till more stone arrives onsite. If left overnight a wooden board will be placed over it.
09:55 Drillers leave site to get a fax from the hotel.
10:00 GP talking to BR about rock issue.
10:10 GP get a call from JG. JG tells GP that he should be able to approve all wells by 2 pm.
10:15 GP calls DA and informs him about JG's call.

10:45 GP on Cell 1. Crew gluing pipe for other wells.
10:50 Drillers back onsite. **Setting up on W-115.**
11:00 JG calls and informs GP that he has approved all wells.
11:10 GP calls DA and informs him that he wil get some hard copies of the approval for the crew.
11:15 Crew offsite to get lunch.
11:20 GP sends email to County and SCS with new well schedule attached.
11:40 Crew back onsite.
11:50 GP makes copies and gives some to Art and the crew.
12:00 Crew hauling trash at Well W-115.
12:30 Art done drilling at W-115. Moves on to W-106.
12:45 GP gives DA a hard copy of the well schedule. Informs him that the slotted lengths have changed a bit as JG wants some wells to be drilled a little deeper.
12:50 **Art starts drilling at Well W-106.**
13:00 Crew hauling trash at W-115 and covering hole with a grate temporarily.
13:30 Crew hauling trash from W-106.
14:00 Crew gluing pipe.
14:05 Art continues to drill at W-106. Few drops of rain falling. No signs of lightening or thunder.
14:10 Rain getting heavier.
14:15 Rain stops. Art done drilling well W-106 at 28'. GP checks pipe for the well. It is 19' solid (includes a 4' riser) and 13' slotted.
14:18 GP calls JG to discuss stone issue. DA wants to buy stone from Conrad Yelvington. JG disagress.
14:20 Art moving to Well W-107.
14:20 #4 stone added till 13' from top. Geonet inserted.
14:30 2' of backfill soil added. 2' of bentonite plug added. It has gotten dark and the rain is pouring now. Thunder and lightening in the vicinity. Art stops drilling. Never started on Well W-107. Crew fills borehole to top with clean backfill soil. **W-106 set and complete.**
14:35 Crew will haul 1 final load of trash and stop. Crew filling dump truck with trash.
14:45 Dump truck off to dump load.
14:50 Crew will place wooden planks on Wells W-114 & W-115 and call it a day.
15:00 Raining very heavily.
15:10 DA has been offsite for about 30 minutes. He went to buy a wooden board to cover the second well.
15:15 GP gets a call from DA asking about stone approval. GP tells DA that he will have to get the rock from the same supplier. DA says they might have to shut down tomorrow afternoon if they don't get the rock. DA says he will call and talk to JG.
15:20 Crew waiting for DA to return so they can cover the 2 boreholes at W-114 & W-115. Drillers seem to have left the site.
15:25 Rain has stopped. Lightening and thunder still on.
15:30 DA onsite. He tells GP that he spoke to JG. JG said if Conrad Yelvington could provide something in writing that said they got the stone from the same source that provided the rock to the original supplier, then it would be okay.

15:35 GP calls JG to confirm and gets his voicemail.
15:40 Crew covering wells W-114 & W-115.
16:00 GP calls BR and informs him that crew and himself would be leaving site. Crew and GP offsite.
16:45 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, June 10, 2008.
Temperature:91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:00 Gautam Patwardhan (GP) working on daily logs.
06:30 GP emails daily logs.
06:35 GP leaves for site.
06:45 GP heads back to get voice recorder.
06:50 GP calls Dennis Adams (DA) & Bill Routh (BR) and informs him that he is running a little late.
07:30 GP onsite. Drillers and SCS crew already onsite.
07:45 GP and DA discuss stone issue. DA informs GP that they are trying to get the letter.
07:30 **Art starts drilling on Well W-107.**
08:00 Crew gluing pipe.
08:15 DA gives GP copies of drillers logs. Art @ 23' on W-107.
08:25 BR calls and talks briefly with GP.
08:30 DA informs GP that he needs the shop drawing submittal log. GP informs DA that he emailed the log to Robert Butler some time back. DA enquires about the electro fusion couplings. GP informs DA that SCS has not initiated anything yet on the matter.
08:35 Art done drilling at W-107.
08:40 GP hands DA 2 sets of approved shop drawing submittals (LFG Expansion Schedule, Non-calcareous #4 stone, CMP for road casing, Lab Results, Bedding & Backfill Soil, Well Drilling Schedule, Revised Well Drilling Schedule).
08:43 JG called to give information for Well W-131. It is 52' total (20' solid and 32' slotted) with an extra 5' solid riser.
08:45 GP conveys information to DA. **Art starts drilling at Well W-108.**
09:00 GP checking pipe at Well W-107. It is 20' solid (including a 5' riser) and 13' slotted.
09:05 #4 stone added to 11' from top of ground.
09:10 Inserted geonet. Added 2' of backfill soil. Loading dump truck with trash.
09:15 Added 2' of bentonite plug.
09:20 Backfill to top with backfill soil. **W-107 set & complete.**
09:25 Crew cleaning around W-107.
09:30 Art done drilling at W-108. It is 28', 15' solid with another 5' riser & 13' slotted.

10:00 Jarod Thomas (JT) arrived onsite, assumed observation duties while GP conducted biweekly meeting. Observed crew place 2' bentonite plug at Well W-108. **Driller has already started drilling W-109.**

10:05 Crew has backfilled borehole to top with backfill soil. **Well W-108 set & complete.**

10:10 Driller has reached depth at W-109.

10:20 Completed W-109 as follows: Added #4 stone to 14' from top, followed by a geonet, 2' of backfill soil, 2' of bentonite plug, and backfill soil to grade. **Well W-109 set & complete.**

10:20 Noted that SCS is constructing a pad for the drillers with existing soil cover at Well W-110. **Driller starts on Well W-110.**

10:50 GP and DA arrive onsite.

11:00 Driller reaches depth at W-110.

11:15 **Driller starts drilling at W-111.**

11:20 Crew inserting pipe at W-110. Pipe is 19' solid (includes a 4' riser) and 13' slotted.

11:40 #4 stone added to 13' from the top of ground. Geonet added.

11:50 Adding 2' of backfill soil.

11:55 GP goes to drop JT near the admin building.

12:00 JT offsite.

12:05 Added 2' of bentonite plug.

12:10 W-110 backfilled to top with backfill soil. **Well W-110 set and complete.**

12:15 Art moving to W-112. Crew setting up pad for rig at W-112.

12:25 Crew inserting pipe in Well W-111. It is 19' solid (includes a 4' riser) and 13' slotted.

12:40 Crew adds #4 stone till 12.5' from grade.

12:45 Loading dump truck with trash.

12:50 Added geonet. **Art starts on W-112.**

13:00 Added 2' of backfill soil.

13:10 Added 2' of bentonite.

13:20 Backfill to top with backfill soil. **Well W-111 set & complete.**

13:30 Crew loading trash near W-111.

13:45 Art done at W-112. Moving to W-113.

13:46 BR calls – informs GP that Robert Butler had called. Robert said that the 3 shop drawings related to wellheads were submitted with the wellhead submittal. GP informs BR that he would check that out.

14:00 Crew inserts pipe down W-112. It is 19' solid (includes a 4' riser) and 13' slotted. **Art starts drilling at W-113.**

14:05 Crew loading dump truck at W-112.

14:15 SCS has got 2 loads onsite of #4 stone from Conrad Yelvington. They will not use the rock till they get a letter from the supplier stating that the rock meets the specifications.

14:30 Crew gluing pipe. GP checks pipe. It is 24' solid, which includes a 4' riser and 19' slotted.

14:32 It is getting windy and looks like it might rain. Seth (J.H. Webb Surveyor) onsite to drop of a CD and 2 sets of survey drawings.

14:35 DA gives the drawings to GP.
14:40 #4 stone added till 12' from grade.
14:45 Inserted geonet and added 2' of backfill soil.
14:50 Added 2' of backfill soil.
14:55 Backfill W-112 to top with backfill soil. **W-112 set & complete.**
15:05 Art done drilling at W-113.
15:10 Art moving drill rig up the hill. Crew loading dump truck with trash.
15:15 DA calls GP and informs him that he got the letter.
15:20 Dump truck off to dump trash.
15:30 GP calls JG to get approval for the #4 stone – leaves him a voicemail. GP talks to Bob Mackey (BM). BM tells GP to get JG's and BR's approval. GP calls JG and leaves him another voicemail. GP calls BR and informs him about the letter – BR says SCS can use the stone if the analysis on the letter is the same as the previous rock. GP calls BM to inform him of the conversation with BR. BM asks GP to give JG sometime to respond and suggests waiting till tomorrow.
16:00 GP waiting for JG to call.
16:10 GP calls BR and gives him an update on the issue. BR tells GP that the crew can berm the borehole if they couldn't get the approval today.
16:30 It is decided that the crew would continue tomorrow.
16:45 Crew building a berm around the borehole.
17:00 GP asks the crew to lay some plastic over the borehole as well.
17:15 Crew lays some plastic over the borehole.
17:30 Crew berming around W-113.
17:40 Crew offsite.
17:45 GP calls BR and informs him that he is leaving the site.
18:30 GP home.

NOTE: All wells drilled and set today were 6" wells.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, June 11, 2008.
Temperature:89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services). Art Engel and Greg Hamby (Quality Drillers)

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:15 Jarod Thomas (JT) receives call from Gautam Patwardhan (GP) stating that aggregate is approved – info swapped regarding what emails were sent.
07:10 JT arrived onsite – called Bill Routh (BR) to inform that S2li was onsite.
07:20 Observed backfilling at W-113 as follows: 24' solid pipe (including a 4' riser) and 19' slotted. Filled #4 stone till 17' from grade, followed by a geonet, 2' of backfill soil, 2' bentonite plug, and backfill to top of ground with backfill soil. **W-113 set & complete.**
07:40 **Driller starts drilling at W-132.**
08:00 Confirmed with DA that W-113, W-114, and W-115 were left open previously. W-114: 20' solid and 29' slotted. W-115: 20' solid and 34' slotted.
08:10 Observed assembly of pipe for Well W-132 – 20' solid not including the riser and 29' slotted.
08:40 Received call from JG confirming that rock is okay. Observed well assembly for W-131: 20' solid not including the riser and 32' slotted.
09:05 Observed drilling at Well W-132.
09:20 Observed assembly of pipe for Well W-133: 20' solid not including the riser and 28' slotted.
09:35 Reached depth on W-132. Completed W-132 as follows: filled #4 stone to 18' from top of grade, followed by a geonet, 2' of backfill, 2' of bentonite, and backfill to grade with clean backfill soil. **W-132 set & complete.**
10:00 **Driller starts on Well W-131.**
10:50 BR stops by to check on progress; informed BR that things were progressing okay.
11:55 Driller still drilling at W-131.
12:00 Tape check ~ 48'; need to be at 52'.
12:15 Tape check ~ 50'.
12:20 Driller reaches depth at W-131. Continue to set W-131 as follows: Add #4 stone to borehole till it reached 18.5' from the top of grade, inserted geonet followed by 2' of backfill soil, 2' of bentonite plug, and filled the borehole to top with clean backfill soil. **W-131 set & complete.**
12:35 **Driller starts drilling at W-133.**

13:20 Called BR to let him know that JT stepping out for lunch, BR would relieve JT for lunch.
13:30 Driller about 30' from required depth at W-133.
13:32 Driller stopped for phone call.
14:15 JT resuming observation. Driller reached depth at W-133.
14:20 W-133 set as follows: added #4 stone in borehole til it reached 18' from top of grade, inserted geonet on top of stone, followed by a 2' layer of backfill soil, 2' of bentonite, and backfill rest of the borehole to top with clean backfill soil. **W-133 set & complete.**
14:30 Driller starts on W-134.
14:45 DA informs JT that Thursdays work would include backfilling remaining open wells and abandoning horizontal collectors 1, 2, and 3. According to DA, no shop drawings were needed for the abandonment.
14:50 Noted a whole tire had turned up near the pad for drill rig; asked DA to ensure it was taken to the tire processing facility since whole tires can not be placed in landfills.
15:10 Observed pipe assembly for Well W-134: 20' solid with an additional 4' solid riser, and 14' slotted.
15:20 Called Bob Mackey (BM) to report status of wells.
15:30 Called JG to inform him about SCS's plan for Thursday and confirm that horizontal collectors are ok to proceed on.
15:55 Driller reached depth at W-134. W-134 was set as follows: added #4 stone till 18.5' from grade. Inserted geonet followed by a 2' layer of backfill soil, 2' layer of bentonite, and backfilled the rest of the borehole to top with backfill soil. **Well W-134 set & complete.**
17:00 Waste loads hauled for today: W-131: 2 loads, W-132: 2 loads, W-133: 2 loads, W-134: 1 load.
17:20 Work done for the day; called BR to report JT leaving site for office.
18:15 JT arrives at office – responds to emails, scanning logs.

NOTE: All wells drilled and set today were 6" wells.
Above daily is as reported by Jarod Thomas. Typed by Gautam Patwardhan.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, June 12, 2008.
Temperature:91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: Drill Rig AF130, Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

06:15 Jarod Thomas (JT) left home for landfill.
06:50 JT arrived onsite – called Bill Routh (BR) to inform that S2li was onsite.
07:20 SCS arrives onsite.
07:35 JT noticed that phone battery was low.
07:55 SCS going to start backfilling W-115. W-115 details are as follows: filled borehole with #4 stone till 18' from top of grade. Inserted geonet followed by a 2' layer of backfill soil. Added 2' of bentonite and backfilled to top of grade with clean backfill soil. **W-115 set & complete.**
08:10 SCS going to start backfilling W-114. W-114 details are as follows: filled borehole with #4 stone till 18.5' from top of grade. Inserted geonet followed by a 2' layer of backfill soil. Added 2' of bentonite and backfilled to top of grade with clean backfill soil. **W-114 set & complete.**
09:00 Called BR from Dennis Adams' (DA) phone to inform about low battery. NOTE: **W-113 also set & complete.**
09:35 SCS crew cleaning up materials.
09:55 Truck arrives to pick up drill rig.
10:05 Spoke with DA – work won't proceed till after lunch at 12:30. JT left message with BR that he'd head home to get a fresh battery for the phone.
10:20 JT leaving site.
10:25 Attempted to call BR again, call was cut off by low battery. JT returned to site.
10:35 JT borrowed phone to confirm with BR that it was ok to leave site. JT left site.
11:00 JT replaced cell battery, received missed message from BR reiterating that it is ok to leave site.
12:15 JT back onsite, SCS crew at lunch.
12:20 Called BR to inform that JT back onsite.
12:30 SCS crew back onsite.
13:00 **Located horizontal collector HC-3.** Actual position is much different than that shown on drawing. JT took multiple photos to show that valve location is adjacent to existing W-13. JT called Jim Getting (JG) to inform about discrepancy; JG gave go ahead to proceed provided same goals accomplished. JT confirmed with DA methods to be used – goal would be achieved. Go ahead given to proceed.
13:30 Thunder heard, storm clouds moving in.

13:35 Work started. Schedule 40 PVC cap placed on line to be abandoned. Previous cap welded back into place with hot plate on line that's to remain in service. **HC-3 abandonment complete.**

14:00 **HC-2 abandonment started.** Followed same method as HC-3 to abandon HC-2. **HC-2 abandonment complete.**

14:15 Work stopped due to lightening.

14:20 DA decides not to wait out storm; expects it to last till 7 or 8 pm. HC-1 still needs to be abandoned. Survey is not yet approved therefore; SCS will not be onsite tomorrow (Friday).

14:30 Called BR to inform that work was done for the day. JT left site.

15:10 JT arrived at the office.

NOTE: All wells set today were 6" wells.
Above daily is as reported by Jarod Thomas. Typed by Gautam Patwardhan.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, June 17, 2008.
Temperature:91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C

08:30 Gautam Patwardhan (GP) at the office, collecting documents to take onsite.
08:45 GP on way to site.
09:30 GP onsite – calls Bob Mackey (BM). BM is at admin building, waiting for Jim Getting (JG).
10:00 JG & BM at Cell 1. JG, BM, GP, & DA discuss survey. JG informs DA that the surveyors have not provided the excel sheet to him. DA calls Webb Associates and asks them to release information. JG & BM let DA know that electro fusion couplings have been approved. JG authorizes SCS to trench at W-104, W-105, W-106, & W-107. There is a discussion about cut and fill and the necessity to adjust pipe depth to account for the cut and fill. It is decided that there will be a minimum 3' cover (if possible) from top of pipe at the terraces.
10:15 GP gets a call from Jarod Thomas (JT). GP asks JT to be on his way and get to the site.
10:30 GP and DA discuss cover requirements. BM & JG offsite. They plan on going to the office, work on the cut fill data and be back onsite in the afternoon.
10:45 GP drives around the site. Notices that SCS has put the 10" sleeves on some wells.
11:00 JT onsite; GP explains work to be done.
11:25 JT on foot climbing hill, finds equipment on west side, unmanned.
11:40 JT calls DA; DA informs JT that crew offsite for lunch.
11:45 JT inspecting trenching so far on W-107 – note W-107 lateral is outside existing geomembrane cap limits; diameter 4", onslope with terrace and will tie into the 6" existing header near HC-1.
12:00 noted that abandonment of HC-1 was not done yet.
12:05 JT on standby, waiting for crew to return.
12:15 JT observed a Solan trucking truck arrive onsite with backfill.
12:25 JT observed 3 more Solan trucking trucks arrive with backfill.
12:30 JT called BM to confirm that contractor needs to sign off on the receipt of materials.
12:40 JT inspects backfill material for roots, rocks, and other unacceptable debris – appears okay.
12:50 Called DA to know crews whereabouts.
13:00 DA arrived back onsite, followed by other crew members.

13:15 Crew resumes trenching on lateral connecting W-107 to existing header line.
13:55 Dump truck runs out of fuel.
14:15 refueled truck and resumed trenching.
14:50 Trench dug for lateral between W-107 & header. Approximately 6" of backfill for pipe base applied throughout trenching.
15:20 Pipe laid in the trench, slope appears to be greater than 3%. Slope will be confirmed with laser tomorrow. Based on location of header, 2' fill on top of lateral may not be possible. JT waiting for backfill.
16:00 Called GP & BM to find out if an exception had been made to allow SCS to leave trench open overnight which contradicts with specifications. Neither knows of an exception. Called JG to confirm, informed that SCS does not have PVC risers to locate pipe. JG made no exception; SCS may backfill over all areas except where the risers go.
16:10 JT still waiting for backfill
16:25 Backfill arrives.
16:35 Lightening seen. Trench filled in all areas with exposed waste. Bottom end of the trench was vegetation and was left open.
16:45 Work complete. JT leaving site.
17:30 Back at the office.

NOTE: Above daily is as reported by Jarod Thomas & Gautam Patwardhan.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, June 18, 2008.
Temperature:92° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: Front end loader New Holland LW170B, Hertz Forklift, 2 McElroy pipe fusing machines, Dump truck JCB714, Excavator John Deere 120C, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:05 Jarod Thomas (JT) leaving apartment for site.
06:45 JT onsite.
07:00 SCS crew present, DA said some were leaving for more diesel.
07:10 JT checking trench, condition appears ok and in same state as night before. Pipe used – JM Eagle 4" IPS SDR 17. Pipe capped at ends.
07:40 Crew back.
08:00 Trenching on W-106 lateral started with larger Komatsu excavator. Excavator with smaller bucket was expected to be used to cut trenches. Using larger bucket to scrape top soil.
08:10 Crew locates header for W-106 lateral tie in. Crew will cut trenches for W-106, W-105, & W-104 today, conduct air tests and backfill all trenches with risers including W-107.
08:15 Crew is locating header for lateral tie in for W-105.
08:20 Header still not found. JT confirmed location of stake.
08:30 Header for lateral tie in for W-105 located.
08:35 Started looking for header for lateral tie in to W-104.
08:40 Bob Mackey (BM) visited site; delivered a drawing showing cut fill for final build out and instructions to adjust trench depth as needed on drawings.
08:50 Header still not found. Crew checking further North, header found just under 6" of soil cover.
09:15 JT noted arrival of new machines; Excavator & Skid Steer.
09:35 JT noted arrival of new equipment: TEREX TA30 30 cy dump truck.
09:45 Trenching started for W-104 lateral to header.
10:00 JT reminds crew that the trench needs to be 4' deep at the terrace.
10:25 Sides of the trench are too unstable for the excavator to approach, bedding being spread by hand.
11:05 Due to extreme shallowness of header (6"), 2' of cover over lateral near end will not be possible.
11:25 Trenching for lateral from W-104 to header complete.
11:40 Breaking for lunch. JT left with crew. Note: 3 loads with 30 cy truck for lateral between W-104 & header.

12:40 Crew and JT back from lunch. Crew going to use survey equipment to get grades for W-104 lateral.
13:00 Grading being done with rakes and shovels.
13:10 Slopes on lateral from W-104 to header range from 9% to 21%. Cover depth is clearly over 2' except at the bottom near the header tie in.
13:15 Laying pipe, PVC risers, magnetic tape, & backfilling.
13:55 Base work complete for W-104 lateral. Tape placed at 1' over pipe.
15:00 Backfill on lateral from W-104 almost complete. JT going to trench for W-107 to observe risers input, tape, & filling.
15:10 JT asked about determining grades. DA informs JT that the grades were quite steep and greater than 3%. Depth to magnetic tape about 1' from top of grade.
15:20 Majority of lateral for W-107 filled. Crew starts trenching on lateral for W-105. Storm clouds coming in.
15:40 DA setting up laser grade to check on slope for lateral from W-105.
16:00 Crew laying bedding behind excavator. Slope so far is greater than 3% as per the laser. Starts to rain, thunder and lightening closing in, crew continues to work.
16:15 Storm seem to have passed.
16:30 Trench from W-105 to header is complete.
16:45 2' cover not achievable on bottom as header is too shallow.
16:50 Crew laying pipe, tape, & backfilling.
17:35 All the trench for W-105 except the bottom is backfilled. The bottom end will be backfilled after pressure test. Work done for the day.
17:45 JT leaving site.
18:15 JT at office, working on paperwork.
19:30 JT leaves the office.

NOTE: Above daily is as reported by Jarod Thomas & typed by Gautam Patwardhan.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, June 19, 2008.
Temperature:91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:15 Gautam Patwardhan (GP) leaving apartment for site.
07:10 GP onsite. Crew coming in.
07:15 GP checking work done in last 2 days. Crew has trenched and backfilled laterals from W-104, W-105 and W-107. They have left 4" risers at periodic intervals to shoot top of pipe elevations.
07:30 Crew trenching lateral at W-106. Dennis Adams (DA) asks GP if anything else is approved. GP says he will check with Bob Mackey (BM) and let DA know.
07:45 Crew compacting bedding with excavator bucket. Bedding material consists of a minimum of 6" of bedding soil.
08:10 GP calls BM to inquire about further approvals. BM asks GP to call Jim Getting (JG).
08:30 GP calls JG and leaves him a voicemail.
08:50 DA calls asking about further approvals.
08:55 GP calls JG and leaves him a voicemail.
09:00 Crew done trenching and partially backfilling W-106. Need more approvals to trench.
09:10 GP calls JG and inquires about further approvals. JG informs GP that BM was supposed to bring a cut fill chart on the field yesterday. Once the chart is on the field, crew can work off the chart. GP informs JG that he has the cut fill chart. JG okays further trenching on the west side as long as the crew follows the cut fill chart. JG also tells GP that the surveyors have made errors in the survey and missed a few spots. JG tells GP that the crew will not be allowed to trench on the east side till a complete survey is approved by JG. GP tells JG that he will call JG later in the afternoon to know exactly what the surveyors need to survey. Based on this conversation crew is ok to proceed trenching on the west side.
09:30 GP talks to DA and informs him that crew can proceed on the west side. GP also informs DA that the surveyors need to shoot more points to get the east side approved. GP tells DA that he would provide more information later in the day.
09:50 Crew starts trenching W-103. part of the crew continues backfilling lateral from W-106 after inserting magnetic tape.
11:00 GP checking trench. W-103 has a good fall on the slope. Crew puts 6" bedding along entire length of the trench.

11:30 GP checks the depth of trench under the terrace. It is a minimum of 3' at the shallow end (from top of pipe) and has the required 3% minimum slope.
12:00 Crew breaks for lunch.
12:45 Crew out to Lowe's to buy PVC risers. DA out to get diesel.
13:00 Crew places pipe in the trench for W-103.
13:10 Crew starts trenching W-101. W-101 also has a 1' cut. Therefore, minimum depth from top of pipe at the terrace is 3'. Crew has trouble getting the 3' depth under the terrace as the header is shallow (1' deep) and approximately 15' away from the well. Top of pipe when placed will be about 2' from ground surface.
13:30 Crew starts on lateral from W-102.
14:00 Crew has trouble locating existing header. Header is not where it is supposed to be as per existing field stake. GP notes that the following equipment is offsite: Front end loader New Holland LW170B, Hertz Forklift, Dump truck JCB714, Excavator John Deere 120C.
14:30 Crew cannot find the header for W-102 lateral tie in. the header turns as per the drawings and the crew is having trouble finding it.
14:45 Crew stops looking for the header near W-102. Decides to backfill laterals for W-106, W-103, & W-101 and look for the header in the morning. Crew will probably backtrack and follow the header from the closest well.
15:00 Crew backfilling trench at W-103.
15:15 Crew inserts magnetic tap approximately 1' below ground.
15:30 Crew backfilling W-103 lateral to grade.
15:45 Tidying up around W-103. W-103 lateral complete.
16:00 Crew attaching 10" sleeve at W-103.
16:15 Crew backfilling trench for W-101.
16:30 Crew inserting magnetic tape at W-101 lateral. Backfill soil arriving onsite.
16:45 Crew cleaning up around the lateral for W-101.
16:50 GP and crew offsite.
17:40 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, June 20, 2008.
Temperature:93° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaving apartment for site.
07:10 GP onsite. Crew already onsite.
07:30 Crew starts looking for header.
08:00 Crew tracking/excavating header from existing well EW-13 towards well W-102. Header has a steep down slope and is coming uphill.
08:30 Crew is approximately 40' away from EW-13 and the header is 4' deep. Crew is approximately 30'-35' away from the proposed tie in. Header at the tie in will be a lot deeper than 4'.
08:45 Crew has excavated a lot of trash. There is trash both below and above the header. Header also starts turning and goes downhill.
09:00 Crew has excavated 6' deep. The trench is 8' wide in places where the side walls are starting to cave in due to the greater depth.
09:30 GP talks to Jim Getting (JG) and discusses future tracking. JG asks GP about the survey. GP tells JG that he would enquire with Dennis Adams (DA) and let JG know. JG okays trenching about W-108, W-113, W-114, W-115, W-118, W-116, and W-119. Crew wanted to continue trenching up the hill from W-102 to W-120 and then on to W-111. JG says he would need survey stats to approve that trench. GP asks DA to stop the trench at W-102.
10:00 GP informs DA about the necessity for survey. Crew bedding trench till W-102 and continues trenching at the same time. The header is approximately 7' deep. GP walks down in the trench to check the depth of the trench. The existing header is a 6" header.
10:15 Crew setting up level to check elevation change.
10:30 There is approximately 10% slope on the lateral from the tie in to well W-102.
11:00 Crew has almost finished trenching and bedding trench W-102.
11:15 Crew hauling trash.
11:30 Crew breaks for lunch.
12:30 Crew back onsite.
13:00 Refueling dump truck and hauling trash.
13:15 Crew bringing backfill soil to cover existing header.
13:30 Crew setting risers around trench to cordon off area with caution tape. Crew will leave approximately 15' of the trench open as they would need the room to tie the

lateral to the existing header. The extra space is needed as they need to turn the lateral to meet the header.

13:45 Crew continues to backfill exposed header.

14:00 Crew picking up trash around trench W-102.

14:30 Crew finishes hauling trash from the trench. They have hauled approximately 5-6 loads of trash as the trench is deeper than others.

14:45 Crew moving to W-108.

15:00 Crew exposing header tie in location for W-108. crew stops after exposing header as they won't have time to backfill trench.

15:10 JG calls and informs GP that the survey is missing some shots in the North East corner, near isolation valve V-5, and some on top of the hill. JG thinks that the pipe may be shallow near V-5. GP informs JG that the drawing shows a minimum of 2' fill in the vicinity of V-5. JG says he would double check and call back. He would also send the survey notes to GP by email later today. JG asks GP to give Jim Flynt (JF) an update on the project.

15:20 GP talks to DA and leaves site.

15:30 GP talks to JF in his office and gives him a project update. GP also informs JF about the header depth (6'-7') near the proposed tie-in for W-102.

15:45 GP leaves JF's office.

16:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, June 23, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaving apartment for site.
06:50 GP calls Dennis Adams (DA) – informs DA that he is running a little late as he has to go back and get the camera.
07:30 GP onsite. Crew already onsite (Dennis Adams & Josh Adams onsite, rest of the crew at Polk County).
07:45 GP, DA talking to Bill Routh (BR).
08:00 Crew getting equipment ready to start pressure test at W-107 lateral.
08:15 **Crew starts pressure test on the lateral from W-107 @ 10 psi @ 82° F.** GP informs DA that the pressure gauges that SCS has are not of good quality. They are not liquid filled and are 100 psi gauges. Therefore it is difficult to measure pressure change as the needle doesn't move too much. Ideally, the crew should be using 15 or 30 psi gauges. DA informs GP that they couldn't find any gauges at Home Depot or Lowe's. GP asks DA to check at Grainger or Baron's and try to find the right gauges. GP also informs DA that if the needle drops below the original position, the test would be considered a failure as there is no way to measure minute pressure changes on a 100 psi gauge.
08:25 **Crew starts pressure test at lateral coming from W-106. The initial pressure is 10 psi @ 82° F.**
08:30 GP goes to BR's trailer to see if there are any stores in the vicinity that sell pressure gauges.
08:35 The internet is down and there is no phonebook available.
08:40 GP speaks to BR. BR arranges for Terra to loan their pressure gauges to SCS.
09:00 Tony from Terra gives GP 2 25 psi oil filled pressure gauges.
09:10 GP back on Cell 1 with the gauges. Crew is trenching lateral W-108.
09:30 GP informs DA that there is a 2' fill where the lateral from W-108 crosses the terrace. DA informs GP that he would try to have the top of pipe approximately 2' below grade on the side slope and 1.5' below grade under the terrace.
09:45 Chris Boggs (CB) calls and says he found a 15 psi gauge at Grainger. DA asks CB to buy it and get it onsite.
10:00 DA continues to trench. Josh Adams (JA) bringing in bedding soil and hauling trash.
10:45 DA finishes trenching from well W-108 to the proposed header tie in location.
11:00 Chris Boggs and Dusty Adams onsite.

11:05 **Pressure test passes on laterals W-106 and W-107.**
11:10 DA starts trenching from well W-109 to the proposed header tie in. There is a 1'-2' fill at this section. DA will stay approximately 18" below grade (Top of Pipe). Rest of the crew will start pressure test on W-105 and W-104.
11:30 **Started pressure test on W-105 lateral @ 10.3 psi at 88° F.**
11:45 **Started pressure test on W-104 lateral @ 10 psi at 88° F.**
12:00 Crew breaks for lunch.
13:00 GP has been checking pressure test readings every 20 minutes. Pressure at W-104 lateral has been dropping steadily. **Pressure test at W-105 is good.**
13:15 DA continues to trench at lateral W-109.
13:30 GP informs crew that **the pressure test at W-104 has failed** and needs to be redone after testing the line for leaks.
13:45 GP calls Jim Getting (JG) to discuss survey. GP & JG agree to talk at14:30 as JG is out to lunch.
14:00 Crew is trenching lateral W-109 and wants to continue uphill to W-120. GP asks crew to stop trenching at W-109 and not continue further uphill as some survey points are needed before crew can trench uphill.
14:10 GP gives BR some pictures of the job taken till date. BR copies pictures onto his laptop from GP's flash drive.
14:20 GP gets a call from DA. DA informs GP that he will be offsite the rest of the afternoon as he is going to Polk County. GP informs DA about the failed pressure test on W-104.
14:30 GP calls JG and discusses survey. JG wants the surveyors to give him elevations approximately every 50' on the header line and the rest of the hill on the East side. GP informs JG that he would walk the hill with the surveyors tomorrow.
14:40 GP gets a call from Bob Mackey (BM). GP informs BM that he would call him back.
15:30 GP talks to BM on the phone and gives him an update.
16:00 GP leaves BR's office and drives back up the hill. Crew has finished placing pipe in trench W-108 & W-109. GP checks for slope. There is plenty of slope (>3%) on both laterals.
16:15 Crew goes to check the fittings on failed pressure test at W-104. They use a squeeze bottle with soap solution to test for leaks. They detect a leak where they tapped in a metal pipe to a HDPE cap. They will attach more tape, tighten the pipe and try to test again.
16:30 Crew backfilling trench W-108 partially.
16:50 Crew partially backfilling trench W-109.
17:00 It starts raining heavily. Crew finishes backfilling W-109 partially. They have got enough soil in the trench to cover the pipe.
17:05 GP calls BR – informs him that GP & crew will be offsite in 10 minutes.
17:15 Crew and GP leave site.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, June 24, 2008.
Temperature: 92° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaving apartment for office to pick up documents.
07:00 GP on way to site.
07:35 GP calls Bill Routh (BR) and checks in.
07:45 GP on Cell I. crew already onsite. Crew has started trenching lateral at W-110. The existing header at the point of tie in is ~1' deep. The lateral at W-110 is ~3' deep (top of pipe).
08:00 Surveyors (Webb & Associates) onsite.
08:15 GP gets a call from Dennis Adams (DA) – notifying GP about the surveyors.
08:30 GP talks to Scott – surveyors crew chief and explains scope of work - need shots approximately every 50' on the entire East side of the hill plus shots at grade changes.
09:00 GP printing minutes of meeting and revising submittal log.
09:30 GP checks on the surveyors. Surveyor's are taking elevation shots approximately every 50' and at all grade changes.
09:40 GP checks with DA on crew progress. DA informs GP that the crew has moved on to lateral at W-112 and started trenching.
09:45 GP at Cell I observing trenching. The area around W-112 lateral has no cut and a 1' fill for a short portion near the tie in to the existing header.
09:50 GP leaves to attend meeting.
10:50 GP back on hill. Crew informs GP that the header near W-112 is closer to the well than shown on the record drawing.
11:15 Crew breaks for lunch.
12:15 Crew back onsite. They will start tie ins for W-107, W-106, and W-105. They will pressure test a few more laterals and also retest W-104. NOTE: Crew has trenched laterals from W-112 & W-113 when GP was attending the meeting.'DA pointed out in the meeting that W-113 would be a down slope well.
12:30 Crew gathering electro fusion couplings to take to the well.
12:45 GP taking pictures of header near wells W-112 & W-113.
13:00 GP observing surveyors.
13:15 GP asks Scott if there was any change in ground elevations when they took 5' offsets on the header on the East side. Scott called his crew to confirm and they confirmed that they were going uphill.
13:30 Crew inserting the electro fusion couplings at lateral W-107 tie in.

13:45 Crew starts electro fusing 1st electro fusion coupling at W-107 lateral tie in.
13:55 Crew starts electro fusing 2nd electro fusion coupling at W-107 lateral tie in.
14:05 Crew done electro fusing at lateral W-107 tie in. GP hand delivers shop drawing submittals to DA. They are 2 sets of drawings for: electro fusion couplings, gaskets & bolts, & pre-con video.
14:10 Bob Mackey (BM) calls – informs GP that Jim Getting (JG) wants some shots at isolation valve V-5.
14:15 GP calls DA and informs him that they need shots at V-5.
14:20 DA & GP talk to Scott – inform him about additional shots at V-5.
14:30 GP drops of shop drawing submittals on BR's chair.
14:45 Crew starts electro fusing 1st electro fusion coupling at W-106 lateral tie in.
14:55 Crew starts electro fusing 2nd electro fusion coupling at W-106 lateral tie in.
15:15 GP & DA at V-5; helping surveyors locate points.
15:25 Crew setting up to electro fuse W-105 lateral to the existing header.
15:30 Crew starts electro fusing 1st electro fusion coupling at W-105 lateral tie in. Total time to fuse 1 6" coupling: 412 sec.
15:40 Crew starts electro fusing 2nd electro fusion coupling at W-105 lateral tie in.
15:50 Crew starts electro fusing 4" coupling on the W-107 lateral. Total time to fuse a 4" coupling: 114 sec.
16:00 Crew will move on and set up pressure tests at lateral W-103, & W-104.
16:30 Pressure test started on lateral W-104 @ 10.2 psi @ 95°F.
16:40 Pressure test started on lateral W-103 @ 10.0 psi @ 95°F.
16:45 Crew preparing to leave; loading equipment.
16:50 GP calls BR – informs him that crew and GP would be offsite in 10 minutes.
17:00 Crew offsite. GP offsite.
17:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, June 25, 2008.
Temperature: 90° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, New Holland E80MSR Mini Excavator.

06:45 Gautam Patwardhan (GP) leaves for site.
07:30 GP onsite. GP tries to call Bill Routh (BR); has phone trouble as calls won't go through.
07:45 GP checking pressure on laterals W-103 & W-104. It was left under pressure last night. The readings look good. GP will check it over the next hour and take readings.
08:15 Crew fabricating T that will tie in the lateral to the header.
08:30 Dennis Adams (DA) inserting the well heads. He has placed 5 well heads so far. Approximately 20 wells have the 10" sleeves on them.
09:00 GP checks the pressure in laterals W-103 & W-104. The pressure has held. **Laterals W-103 & W-104 pass the pressure test.**
09:15 Crew cutting the header at W-104 tie-in in order to connect the lateral to the header.
09:20 Crew inserting electro fusion couplings.
09:30 Crew places the T fabrication between the header and the lateral.
09:35 Crew fuses the lateral to the T.
09:40 Crew slides the couplings on the right and left end of the T fabrication in such a way that half the coupling is on the T and the other half is on the header.
09:45 Crew fusing the first coupling.
09:55 Crew fusing the second coupling.
10:05 Crew moves on to lateral W-103.
10:15 Cutting existing header to place T fabrication.
10:20 Fusing the lateral from W-103 to the T.
10:30 Crew electro fusing first coupling to the header.
10:40 Crew electro fusing second coupling to the header.
10:45 Half the crew moves on to set up pressure test at W-101.
10:55 **Pressure test started on lateral W-101 @ 10 psi @ 88°F.**
11:00 Setting up air test on W-108.
11:20 **Pressure test started on lateral W-108 @ 10 psi @ 89F.**
11:30 Crew leaves for lunch.
12:30 Crew back onsite.
12:45 **GP checks the pressure tests on laterals W-101 & W-108. They pass the pressure test.**

13:00 DA installing wellheads. Crew fabricating T for lateral to header connection.
13:30 Getting dark; thunder heard in the distance.
14:15 Thunder, lightening, and rain. New equipment onsite – ASAP Rental, New Holland E80MSR Mini Excavator.
14:20 Crew waiting out the storm.
14:35 Not raining heavily anymore. Slight drizzle still around. Crew working to expose the header near W-108 lateral tie in. the 2" air line is on the landfill side and is in the way of the tie in. DA excavates some soil on either end of the header trench so crew can move the 2" line out of the way.
14:50 Rain is getting heavy. Lightening and thunder heard. Crew stops and gets back in the trucks.
15:05 GP calls DA to ask if they should quit as the rains don't seem to be stopping. DA agrees and calls it a day.
15:10 GP calls BR – informs him that crew will be leaving soon.
15:30 Crew and GP offsite.
16:15 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, June 26, 2008.
Temperature: 89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, New Holland E80MSR Mini Excavator.

06:45 Gautam Patwardhan (GP) leaves for site.
07:15 GP stops for gas. Notices a low tire and fills the tire.
07:45 GP onsite. Crew onsite already. Air test on laterals W-101 & W-108 had passed yesterday. Crew working on exposing the header at the lateral W-108 tie-in.
08:00 GP calls Bill Routh (BR) – checks in.
08:30 GP calls Jim Getting (JG) – inquires about survey. JG says he should have something approved later today or early tomorrow. JG also says that the survey looks OK.
08:45 GP talks to Dennis Adams (DA) – asks about schedule for the day. DA says they will backfill and complete laterals W-101 through W-106 and W-108.GP tells DA that he would be offsite for 3-4 hours.
09:10 GP calls BR and leaves him a voice mail.
09:30 GP calls DA to double check that the survey riser goes on top of the T at the header tie-in.
09:45 GP leaves Orange County for Osceola County.
12:45 GP near scale house at Orange County.
13:00 GP calls BR – informs him that GP is back onsite.
13:15 GP drives around the site. Trenches at W-108, W-107, W-106, W-105, & W-104 have been backfilled and are now complete.
13:20 GP calls DA to check if crew is at lunch. DA says crew will be back onsite in 15 minutes.
13:40 Crew back onsite. ASAP rental mechanic onsite.
13:45 ASAP mechanic checking small excavator. Small excavator is too slow on the slopes.
13:50 DA working the slopes at W-104. Excavator a little faster but still slower than usual.
13:55 Getting dark. Lot of thunder, some lightening.
14:05 Lightening seems to have stopped. DA resumes and starts working; grading slopes near Lateral W-103.
14:20 Crew stops as it starts raining.
14:35 Rain stops. GP goes to check other half of the crew. Crew has started trenching at lateral W-117. GP asks them to stop as they are not approved to trench lateral W-117 yet.

14:50 Crew moves on to lateral at W-118.
15:00 Crew starts trenching at lateral W-118. DA working at the grades near W-101, and W-103 through W-108.
15:30 GP talks to Dusty Adams – tells him that they need to be approximately 4' from top of pipe on the uphill side of the terrace near W-118.
15:45 Starts drizzling. No thunder or lightening. Crew continues.
16:15 Crew about 50' away on the trench from well W-118. the trench near the terrace is 5' deep (to bedding soil).
16:45 Crew still trenching and hauling trash from the trench near well W-118.
17:00 Crew stops for the day.
17:05 GP calls BR – informs him that they have stopped for the day and will be leaving.
17:15 Crew and GP offsite.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, June 27, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, New Holland E80MSR Mini Excavator.

05:15 Gautam Patwardhan (GP) in office working on Southport Perimeter probe data.
06:30 GP leaves for site.
07:15 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite. Dennis Adams (DA) not onsite, ASAP rental onsite.
07:30 Crew continues trenching uphill from W-112 to W-118.
07:35 ASAP offsite.
08:00 DA onsite.
08:45 Crew finishes trenching from W-112 to W-118. DA inserting 10" sleeves on the wells.
09:00 Crew fabricating tie-in connections.
09:45 Backfill soil onsite.
10:15 **Pressure test started on lateral running from the existing header to wells W-112 & W-118. Pressure reads 10 psi at 82° F.**
10:30 GP calls Jim Getting (JG) – inquires about survey. JG says they are working on it and need another 2 hours or so to finish it.
10:45 Crew working on connecting the T fabrication to the header South of W-112.
11:00 Crew cleaning up and hauling trash around header tie-in.
11:30 **Pressure test on lateral running from the existing header to wells W-112 & W-118 is OK. Pressure reads 10 psi at 83° F.**
11:35 Crew electro fusing the T fabrication to the header.
11:45 Crew electro fusing the lateral running from wells W-112 & W-118 to the T fabrication.
12:00 Crew breaks for lunch.
13:15 Crew back onsite. BR on hill. GP talks to BR and updates him on progress; informs BR that SCS will be onsite on Saturday inserting the 10" sleeves on the wells. GP tells BR that S2li doesn't need to be onsite on Saturday to watch SCS put the sleeves on. BR concurs.
13:40 BR offsite.
13:45 Crew partially backfilling trench for lateral running from W-112 & W-118. Inserting PVC risers at grade changes to shoot elevations for as builts.
14:15 Crew rolls magnetic tape in the trench.
14:35 Crew continues to backfill over the magnetic tape.
15:00 Small excavator has a problem. The rubber tracks have come off on one side.

15:05 JG calls – informs GP that they are almost done working on the survey and he would send it out in the next few hours.
15:15 Crew continues backfilling with bigger excavator.
15:20 Some members of the crew trying to fix the small excavator. They try to hammer the rubber tracks back onto the excavator pulley.
15:30 Crew using the bigger excavator and a chain to get the rubber tracks back onto the smaller excavator.
16:00 Mini excavator is fixed.
16:15 DA asks GP if crew can trench tomorrow. GP tells DA to wait for approval from JG.
16:30 DA offsite. Crew continues to backfill lateral trench from wells W -112 & W-118 going towards the header.
17:00 Crew grading surface in the vicinity of well W-118
17:15 Crew offsite. GP talking to BR – informs BR that crew might trench tomorrow if JG approves some more laterals. Also tells BR that GP will be onsite if crew decides to trench after JG's approval. If JG does not have the survey approved, the crew will not trench and GP won't be onsite tomorrow. Crew will be onsite to fabricate the 10" sleeves and other tie-in fittings.
17:30 GP offsite.
18:15 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, June 30, 2008.
Temperature: 92° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, New Holland E80MSR Mini Excavator.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
07:30 Crew onsite; is setting up to start trenching lateral from W-115. Dennis Adams (DA) asks GP about further approvals. Nothing further has been approved yet.
07:35 Backfill soil coming in onsite.
07:45 Crew has exposed the header where they plan to tie-in the lateral coming from W-115. Header is a little shallow; seems like the crew won't get the 3% slope if they tie-in the lateral at the exposed location. Crew gets out the laser to check fall on the pipe. If crew connects the lateral at the exposed location, they will have a 6" cover at the tie-in at the well.
08:00 GP notices another stake with #115 written on it. It is downhill from the current exposed header. GP asks crew to move the tie-in to the header down slope in order to get the required fall. DA trenching from W-114 to the header.
08:10 GP goes to check the trench running from W-114 to the existing header. DA has exposed the triplanar liner at the anchor trench. He has sufficient slope till he reaches the terrace. At the terrace the soil cover is only 15"-18".DA can't dig any deeper as he is already on the liner. The lateral pipe at the terrace crossing between the header and the well W-114 will be shallow (15"-18" from grade) halfway from the terrace uphill to the well.
08:15 Crew filling dump truck with trash at W-115.
08:55 GP calls Jim Getting (JG). JG informs GP that everything has been mailed to GP a few minutes ago. GP suggests that JG email the data to Louise Mitchell at the office as he can get the data from her incase there is no internet access at the County Field Office trailer.
09:30 Crew had set up 2 air tests over the weekend. Those laterals will be connecting wells W-115 & W-117 to the header. The laterals were cut and the necessary fabrications were put in place and the assembly was placed next to the proposed trench location for air tests. Although the laterals have retained the air pressure over the weekend, GP will check for pressure drop over the next hour for reporting purposes. **Air tests started on laterals W-115 & W-117 @ 10 psi @ 92°F.** GP goes to BR's trailer to check for internet access. There isn't any.
10:00 Crew has finished trenching laterals from W-114 & W-115.
10:30 **Air test on laterals W-115 & W-117 pass. Pressure at 10 psi @ 92°F.**

11:00 DA working with the smaller excavator trying to expose the connection for lateral coming from W-116 at existing well EW-18.
11:15 Crew fabricating T's for tie-ins.
11:30 **Pressure test started for laterals coming from W-114 & W-113. Pressure at 10 psi @ 92°F.** Crew leaves for lunch.
12:30 Crew back onsite. Test on the laterals from W-114 & W-113 is ok. GP will let the test stay for another hour for reporting purposes.
13:00 Half the crew working @ lateral from W-114; dragging pipe and making connections. Rest of the crew at lateral W-117 trenching at the flat portion on the hill crest.
13:20 Fusing 4" lateral @ W-1113.
13:30 Electro fusing 8" coupling to the header.
13:45 Electro fusing second 8" coupling to the header.
13:50 **GP checks on the air tests. Pressure still at 10 psi @ 92°F. Air tests on laterals coming from well W-113 & W-114 pass.**
14:00 Moving to well W-115. DA will backfill trench @ W-114.
14:15 Crew cuts the header where the lateral from W-115 will tie in.
14:20 Crew fuses (butt fuse) lateral to T fabrication.
14:30 Crew electro fusing 1st coupling to T fabrication & the header.
14:40 Crew electro fusing 2nd coupling to T fabrication & the header. Part of the crew continue backfilling trench at W-114. They will backfill trench at W-115 when they are done at W-114.
14:45 Half of the crew moves to tie-in W-117 to the header. The trench was dug by DA this morning.
15:00 Crew exposes the riser at existing well EW-19. The lateral from W-117 is going to tie in to the riser at EW-19. Crew notices that EW-19 has 2 laterals. The original lateral is very deep and is probably not pulling any vacuum. There is another lateral tied in to the riser.
15:10 Crew cuts the new lateral at EW-19 & check for vacuum. There is vacuum on it. Crew will tie the lateral coming from W-117 to this lateral.
15:40 Crew butt fusing lateral coming from well W-117 to T fabrication.
15:50 Crew cutting existing lateral to place T fabrication.
15:50 Crew electro fusing 1st 4" coupling between existing lateral & T fabrication.
16:00 Crew electro fusing 2nd 4" coupling between existing lateral & T fabrication.
16:10 Crew will backfill trench W-117 & W-115 after placing the trench tape.
16:15 Crew hauling trash. Part of the crew backfilling. DA has finished backfilling trench from W-114. He has mounded some dirt at the terrace between W-114 and the header as the pipe there was a little shallow.
16:30 ASAP rental onsite to pick up mini excavator E80.
16:45 DA backfilling trench from well W-115.
17:00 ASAP offsite. GP notices that DA is low on dirt. GP asks if DA is getting more dirt to backfill trench. DA asks crew to get more dirt using the skid steer while he goes to haul dirt to trench at W-117.
17:05 GP gets a call from Sandeep. He informs GP that the header needs to be adjusted on the east side as there is not enough cover over the header to accommodate

downcomer pipes. He also informs GP that the header change needs to be restaked.

17:20 Crew leaving site.
17:30 GP calls BR – leaves him a voicemail & leaves site.
17:35 Very heavy rains & thunder onsite as GP is driving past the scale house.
18:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, July 1, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
07:30 Crew onsite; Dennis Adams (DA) continues backfilling trench from well W-117.
08:00 Crew moving to expose lateral at existing well EW-18. The lateral from W-116 will tie-in to the lateral at EW-18. GP notices that there is a lateral running uphill from EW-18 besides the original lateral running down to the header. This lateral is probably the one that connects to EW-19 (Jumper). The existing lateral at EW-18 is only a foot deep.
08:30 **Crew starts pressure test for lateral at W-116 @ 10.1 psi @ 83° F.**
08:45 GP talking to DA; informs him about the situation with downcomer pipes. GP tells DA that the header needs to 6' deep at places where the header crosses the downcomer pipes. Might need to be even deeper in places where there is a cut. DA says this might need a change order and a time extension. GP also informs DA that the header will be moved uphill to facilitate construction and would need to be restaked. GP tells DA they would discuss in more detail later.
09:00 Crew trenching from well W-109 to W-122.
09:30 **Pressure test on the lateral from W-116 @ 10.2 psi @ 84° F. Pressure test OK.**
10:00 DA continues trenching. Crew hauling trash, making HDPE risers, bringing in bedding sand.
10:30 DA done trenching from W-109 to W-122. The trench is a little shallow where it meets W-122. DA can't dig deeper as they won't get the 3% slope. Crew will add 6"-12" of backfill soil around W-122.
10:40 DA starts trenching from W-110 to W-121. GP informs DA that there is a 4' cut at the terrace near W-121 and DA needs to stay 6' deep near the terrace. DA will try to stay as deep as possible and still maintain the 3% slope on the pipe.
11:00 **Crew starts pressure test on the lateral running from W-122 to W-109 to the header @ 10.1 psi @ 89° F.**
11:30 Crew breaks for lunch.
11:45 Bob Mackey (BM) calls; says he will be onsite in a little bit.
12:45 Crew back onsite. BM onsite.
13:00 GP discusses downcomer issue with BM. Discusses need to survey again. BM offsite.

13:10 DA continues trenching at W-121.
13:30 GP checks the pressure test on W-109, W-122 lateral. Pressure still at 10.1 psi. GP will leave it on for another hour for documentation purposes.
14:00 Crew done trenching lateral from W-121 to W-110 to the header. So far, they have trenched laterals from W-116, W-121/W-110, and W-122/W-109 today. They will try to tie-in the above 3 laterals to the header and backfill the rest of the afternoon.
14:15 GP goes up the hill to check the trench at W-117. The trench is being backfilled to grade. Crew places trench tape 12"-18" from grade. Part of the crew fabricating and fusing lateral riser at well W-121.
14:30 **GP checks the pressure test on lateral running from W-122 to W-109 to the header. Pressure still @ 10.1 psi @ 89° F. Pressure test OK.**
14:45 DA backfilling trench W-122/W-109.
14:55 Crew goes to the top of the hill to get more soil.
15:00 GP drives over to existing well EW-18 where crew is connecting lateral coming from well W-116. They will cut the current elbow fitting and insert a T joint to add the new pipe.
15:15 DA starts backfilling trench from W-116 to EW-18.
16:00 DA continues to backfill. **Crew starts air test on the lateral running from W-121 to W-110 to the header. Pressure reads 10 psi @ 87° F.**
16:05 Crew has partially backfilled the trench and has placed the trench tape. GP drives by W-108 on his way back up the hill. Notices that yesterday's rain has made huge ruts @ W-108 and the trench and washed quite a bit of the dirt downhill. Crew will have to put more dirt and regrade the slope.
16:15 DA gets more dirt and finished backfilling trench from W-116 to EW-18. Moves on to backfill trench W-121/W-110.
16:45 Partially backfills trench W-121/W-110 to tie-in.
16:50 Crew hauling dirt.
17:00 Crew moves on to backfill lateral from W-122/W-109 to tie-in.
17:15 Hauling dirt. Backfilling the 2 trenches mentioned above.
17:30 Crew done for the day. Will continue backfilling tomorrow. Crew offsite.
17:40 GP calls BR – leaves site.
18:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, July 2, 2008.
Temperature: 89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
07:20 GP on Cell 1. The site got a lot of rain last night. There are puddles of water everywhere. The backfill at W-108 is worse than the previous night. Dennis Adams (DA) is regarding the slope around W-108.
07:40 Solan Trucking bringing backfill onsite. One truck gets stuck in the damp mulch on top of the cell. Crew trying to pull it out.
08:10 Crew fabricating the tie-in for lateral W-122/W-109 to header. DA backfilling trench W-122/W-109 to header.
08:30 DA moves to backfill trench W-121/W-110 to header.
09:00 Crew working on the header tie-in for lateral W-122/W-109.
09:10 Crew ties in the lateral to the T fabrication.
09:20 Crew electro fuses 1st electro fusion coupling to attach the T to the header.
09:30 Crew electro fuses 2nd electro fusion coupling to attach the T to the header.
09:45 Moving on to lateral W-121/W-110.
10:00 Exposing header at the W-121/W-110 header tie-in.
10:15 Crew fuses (butt fuse) lateral W-121/W-110 to T fabrication.
10:30 Crew electro fuses 1st electro fusion coupling to attach the T to the header.
10:45 Crew electro fuses 2nd electro fusion coupling to attach the T to the header.
11:00 Crew hauling dirt and placing it in the W-122/W-109 lateral trench.
11:30 Crew offsite for lunch.
12:30 Crew back onsite. DA informs GP that crew will finish backfilling W-121/W-110, W-122/W-109, and W-113 later this afternoon. They would also connect the flex hose and rest of the fittings on the well heads and regrade all the slopes where necessary. Crew will perform the above tasks the rest of the afternoon and tomorrow. Crew will not be working on Friday (4th of July) and will start trenching the North South trench on the west side Monday morning.
12:45 DA leaves site to get 3" PVC pipe.
13:30 DA calls GP and asks him to send over header information to the surveyors.
14:00 GP calls Jackie (Webb & Associates) to get an email address. The email address is webbengr@aol.com.
14:05 Crew working @ W-113 to header tie-in.
14:20 DA back onsite.

14:45 DA grading and backfilling trench W-121/W-110.
15:00 Crew connecting fittings on well W-113.
15:15 Crew connecting a saddle on the header near well W-113. W-113 is a down slope well.
16:00 Crew hauling dirt, grading trench, and backfilling @ W-121/W-110 and surrounding vicinity.
16:30 Crew hauling dirt, grading trench, and backfilling @ W-122/W-109 and surrounding vicinity.
17:00 Crew backfilling trench at W-113.
17:30 Crew has finished grading and is getting ready to leave.
17:45 Crew offsite.
17:50 GP calls BR – informs BR that crew won't trench till Monday and they plan to install rest of the sleeves and wellheads tomorrow. GP and BR agree that S2li don't need to be onsite for the well head installation. GP informs BR that Jared Thomas (JT) would be onsite Monday.
18:00 GP leaves site.
18:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, July 7, 2008.
Temperature: 89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Jared Thomas (JT) leaves for site.
07:10 JT onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
07:15 Brief safety meeting held.
07:30 Noted that no camera is available for use. Inspected work so far on open trench.
07:40 Trenching started on lateral from W-119 to tie-in.
07:50 Trenching uphill from W-102 immediately reveals waste, unlikely to be of any use for backfill.
08:00 JT calls GP to confirm that camera is with GP. JT noted that open trench from previous week was slightly washed out.
08:05 First load hauled for the day. Trenching stopped while waiting for truck to return.
08:15 Trenching resumes.
08:30 Trenching stopped as second load is hauled. Clean up of spilled waste going on.
08:45 Trenching resumes.
08:55 Trenching stopped as third load is hauled.
09:10 Trenching resumes.
09:20 Fourth load hauled. Confirmed that the trench depth with bedding at terrace is 6'; complies with corrected depth plan.
09:35 Trenching resumes.
09:45 Fifth load hauled.
09:55 Trenching resumes.
10:00 BR called- JT informs BR of scope of the work for the day. BR onsite – observing from top of the landfill.
10:10 Sixth load hauled.
10:15 JT meets with BR to discuss additional cuts/depths for select trenches. BR has not received a copy of plans that show the extra cuts. JT will get a copy for BR. JT called Bob Mackey (BM) for a set of extra plans.
10:25 Trenching resumes.
10:35 Seventh load hauled.
10:45 Confirmed with crew that trenching would stop at W-120 and pipe would be backfilled. Trenching across would resume tomorrow as well as the tie-in for lateral W-119.
10:50 Trenching stopped as crew has a safety meeting via phone from SCS office.
11:35 Break for lunch. Called BR to inform – left message.

12:45 Back onsite. Called BR. Trenching resumed.
13:05 Eighth load hauled.
13:20 Trenching resumes.
13:30 Storm clouds overhead; started raining heavily. 9th load hauled.
13:35 Trenching paused, awaiting direction from DA regarding weather conditions.
13:40 Trenching continues regardless of weather; JT calls BR & S2li for information regarding weather.
14:00 Rain easing up.
14:05 10th load hauled. Trench stopped at edge of the road.
14:10 BR called regarding weather; informed him that trench would stop at edge of the road. Lightening sighted nearby.
14:35 Crew readying pipe.
15:10 Still fusing pipe together. Truck loaded with backfill.
15:35 pipe being dragged into place by excavator. Raining again.
16:00 Pipe in place, end touches existing header. Riser is aligned with W-102.
16:20 Approximately 6" of cover placed over top of pipe. Some areas left exposed; approximately 15' at top of hill that was in excess of open trench, will tie-in to W-120. Area around W-102 left exposed for W-119 tie-in. Area around header left exposed for tie-in.
16:50 JT notices high amount of hard sand in the backfill material.
17:00 Risers being installed every 50' or at grade change; whichever occurs first. Magnetic tape being laid down.
17:10 Backfilling, depth varies.
17:30 Done for the day, backfill incomplete due to poor weather conditions. Crew offsite. JT called BR to inform about work done. JT leaving site.
18:20 JT home.

(Gautam S. Patwardhan)

NOTE: Field Daily as reported by Jared Thomas, typed by Gautam Patwardhan

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, July 8, 2008.
Temperature: 90° F, Hot, Humid, & possible thunderstorms in the afternoon.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for the site.
07:15 GP onsite; calls Bill Routh (BR) and leaves him a voicemail informing him that S2li is onsite.
07:30 Josh Adams onsite.
07:50 Rest of SCS crew onsite.
08:00 GP talking to Dennis Adams (DA). DA says crew finished putting up flex hose and finishing up 19-20 wells on the west side on Thursday. Crew came up the North Slope from W-102 and trenched up to the access road on top. Progress was slow as they were ~ deep at the terraces and it rained in the afternoons.
08:15 Crew starts trenching over the access road.
08:50 Dump truck off to dump trash.
09:10 Crew checking level with instrument. Crew has trenched to the middle of the access road and is trying to set a high point. The high point will be shown on the as built. There will be a 3% minimum fall from the high point down the North Slope to W-102 and a 3% minimum fall from the high point down the South slope to W-111.
09:30 Crew continues trenching. GP informs crew that they need to be 6' deep at the top terrace on the South slope near W-120.
09:45 GP heads off to attend meeting.
10:50 GP back on Cell I.
11:20 Crew hauling trash.
11:25 Crew has trenched beyond the top terrace and is proceeding towards W-111. The trench is ~6' deep North of the terrace and under the terrace as there is a 3' cut at that spot.
11:35 Crew breaks for lunch.
12:15 Crew back; continues trenching.
12:30 Crew hauling trash.
12:45 GP & DA talking to the surveyors. Making sure they have the points staked correctly as required.
13:15 Getting dark. Storms forecast through out the afternoon.
13:30 Heavy rain and thunder onsite.
13:45 Crew waiting out the storm. DA offsite.

14:00 It has stopped raining. Crew will try to drag pipe down the hill and try to backfill the trench near the access road. They will also try to insert the T connection at W-120.
14:30 Crew has dragged and placed pipe in the trench.
14:45 Crew butt fusing pipe. It is getting dark.
15:00 Crew fusing T fabrication to the lateral at W-120.
15:15 It is starting to rain.
15:20 Crew backfilling trench at the access road.
15:45 Crew continues to backfill after laying trench tape in the trench.
16:00 DA onsite.
16:20 DA offsite.
16:25 GP calls BR – informs him that crew will continue backfilling for another 45 minutes and also tells him that GP will be leaving site.
16:30 GP offsite.
17:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, July 9, 2008.
Temperature: 89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

07:00 Gautam Patwardhan (GP) leaves for the site.
07:45 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
08:00 GP on Cell I. Crew is trenching down from W-120 to W-111. they had stopped after the first terrace yesterday.
08:35 Crew hauling trash. GP checks the depth of the trench at the terrace. It is ~6' from top of bedding soil.
09:00 Crew exposing header South of W-111.
09:30 Crew has trenched from W-120 to W-111. moving on to trench from W-111 to the header.
09:35 GP talks to Dennis Adams (DA) – informs him about change in survey coordinates.
10:00 Crew has finished trenching the North South lateral on the South slope. Crew will move and trench between W-119 to W-102.
10:15 GP informs crew that he trench needs to be 7' deep under the terrace between W-102 & W-119.
10:30 GP talking to surveyors and gives them revised coordinates for two points.
10:40 DA fabricating pipe connections.
11:15 Backfill soil onsite. DA ordered 30 loads. First load in.
11:30 GP checks the trench between W-102 & W-119 and reminds crew that the depth needs to be at least 7'.
11:45 Crew breaks for lunch.
12:00 Crew offsite.
13:15 Crew back onsite; continue trenching.
14:00 Crew continues to trench – taking a little longer as the trench is deep.
14:45 GP gets a call from Sandeep Saraf (SS) at the office to discuss header survey.
15:00 Crew has trenched past the terrace and are proceeding uphill to W-119.
15:15 GP informs crew to maintain a trench depth of ~4' for 10' past the terrace. The trench can be 3' deep 10' past the terrace.
15:30 Crew hauling trash. Backfill soil coming in steadily since morning.
16:00 Crew done trenching from W-102 to W-119.
16:05 Crew working to tie in W-119 to the lateral South of W-102.
16:30 Crew fabricating and fusing riser for W-111 at the lateral.

17:00 Crew fusing end cap to the lateral near header tie in @ South end; preparing for air test.
17:20 Crew backfilling trench partially; will get some backfill in place on top of the pipe before leaving for the day.
17:30 GP calls BR and leaves him a voicemail.
17:45 GP offsite – as crew is backfilling; GP doesn't need to be onsite anymore.
18:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, July 10, 2008.
Temperature: 93° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

07:30 Gautam Patwardhan (GP) leaves for the site.
08:00 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
08:10 GP on Cell I – talking to BR and Bob Mackey (BM). BM gives GP an update on the budget. BM tells GP that S2li spent a little more on the job than budgeted. GP informs BM that he would not be onsite when not needed and coordinate with BR to save time.
08:15 **Crew starts pressure test on lateral running from W-102 to W-120 to W111 and the sub lateral to W-119. Pressure test started @ 10.1 psi @ 78° F.**
09:30 GP checks the air pressure on the lateral. **It is 10.1 psi @ 78° F. Pressure test is OK.**
09:45 Crew moving to backfill trench W-120, W-111.
10:15 GP talking to crew. Crew will be grading and backfilling the entire West side before starting to trench on the East side. Crew also has 2 tie ins left.
10:30 GP goes to BR's trailer to work on field dailies.
11:30 GP on Cell I. crew has left for lunch.
13:00 Crew back.
13:15 GP talks to the crew. They are still backfilling. Backfilling is a little slow as the trench is deep in some places. Crew has not started the tie ins yet.
14:00 GP talking to DA – asks him what the crew plans on doing the rest of the day. DA says they will backfill and get the West side done today. If possible they would work on the tie ins.
14:15 GP informs DA that they might not have to trench 10' deep as previously calculated. GP asks DA when the surveyors would be onsite. DA tells GP surveyors are scheduled to be here on the 21st. crew will probably start work on the header the same day. GP tells DA that 3 points would need to be restaked @ the K location so crew can move the header down slope and get by with a 4' cut instead of a 10' one. DA tells GP that they would restake the 3 points on the 21st.
15:15 GP talking to BR – discusses possibility of cutting down hours & BR picking up some of the inspection work. BR informs GP that he spoke to Jim Flynt (JF) briefly in the morning about the possibility of getting some extra time for field services & JF didn't seem too concerned. BR informed GP that he would have a better answer after the Porter Road meeting.
16:00 GP back on hill. Crew still backfilling.

16:15 DA informs GP that they won't do the tie ins today.
16:30 GP calls BR and leaves site.
17:15 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, July 11, 2008.
Temperature: 90° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

08:30 Gautam Patwardhan (GP) calls Dennis Adams (DA) to inquire about progress. DA tells GP that they would start the tie ins around 09:30 – 10:00. Crew is out getting parts for the tie ins. GP tells DA that he will be onsite around 10:00.
09:00 GP leaves for site.
09:45 GP onsite – talks to Bill Routh (BR). BR offsite.
10:00 Crew working on the W-111 tie in to header. Cleaning up and exposing the header.
10:20 Crew searching for grinder. Not able to find it. it is probably in DA's truck. DA on vacation will be back Thursday. Crew off to buy grinder.
11:00 Crew back with grinder.
11:30 Crew cuts the lateral to size.
11:35 Crew fuses first electro fusion coupling to T fabrication & header.
11:45 Crew fuses second electro fusion coupling to T fabrication & header.
12:00 Crew fuses third electro fusion coupling to T fabrication & lateral.
12:15 Crew cleaning up.
12:30 Crew breaks for lunch.
13:30 Back onsite.
14:00 Preparing to move to W-102 to complete lateral to header tie in.
14:10 Crew at header tie in location. Realize that the T they made was 8" and the header is 6". Crew back on top of the hill to fabricate a 6" T.
15:00 Crew back near the tie in location.
15:15 Crew cutting header to place the T fabrication.
15:30 Crew fuses first electro fusion coupling to T fabrication & header.
15:40 Crew fuses second electro fusion coupling to T fabrication & header.
15:50 Crew fuses third electro fusion coupling to T fabrication & lateral.
16:00 GP calls BR – informs him that GP is leaving site as crew is going to backfill rest of the day.
16:10 GP offsite.
16:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, July 14, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) on way to site.
07:30 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
07:35 DA on vacation. Rest of SCS crew onsite with 2 Aerotek Temps.
08:00 Crew hauling backfill soil to W-111 tie in.
08:30 Crew backfilling tie in at W-111 trench to header.
09:30 Crew starts trenching lateral from W-123 to W-124. The trench is 5' deep at W-123 & 7' deep about 20' South of W-123. GP informs crew of the same.
10:00 Crew trenching and hauling trash.
10:30 GP checks trench depth. It is 5' just South of W-123.
11:00 Crew digging a little deeper. GP checks the trench depth North of the terrace. It is over 7'.
12:00 Crew has trenched from W-123 to W-124. they have stopped about 10' away from W-124.
12:30 Crew breaks for lunch.
13:30 Crew back onsite. Crew gets a call from the temp. they had to leave as one of their apartments got flooded.
13:40 Crew starts trenching at W-136. They will trench down to meet the trench coming from W-123 about 10' North of W-124.
13:45 GP informs crew that they need to be 6' deep at W-136 & 8' deep as they near the terrace.
14:00 Crew hauling trash from W-136.
14:30 GP checks the depth. It is ~6' near W-136.
15:15 Crew has trenched ~30' from W-136. GP checks the depth. It is ~8' deep.
15:45 Crew hauling trash and placing bedding soil.
16:00 Crew has ~10' left to get to the terrace. They will then merge the two trenches; i.e.: one coming from W-123 and the other coming from W-136 and then proceed to W-124.
16:30 Crew has trenched from W-123 & W-136. The two trenches meet about 10' North of W-124. crew proceeds to trench towards W-124. the trench is now shallow ~2-3' deep as there is fill over this area.

17:00 Crew hauling trash, trenching, & laying bedding soil.
17:30 Crew has trenched till W-124. Cleaning up and preparing to leave site.
17:45 Crew and GP offsite after informing BR.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, July 15, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) on way to site.
07:30 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite. Also informs BR that GP would leave site at 08:30 for an hour.
07:45 GP on Cell I. It rained last night and washed some bedding soil down hill. Crew will fix the trenches and get them backfilled today.
08:00 BR onsite.
08:30 GP leaves site.
10:00 GP back. BR leaves. Crew has bedded the trenches again and are placing the pipes in.
10:30 Crew has placed 4" pipe from W-123 to W-1124 and from W-136 to W-124. The two pipes intersect 10' North of W-124.
11:00 Crew fusing pipes at the T junction where they intersect.
11:30 Crew partially backfilling the trench from W-123 to W-124.
11:50 Crew making a small ditch and berm on top of the hill above W-123 to prevent rainwater from washing the backfill down hill.
12:15 Crew breaks for lunch.
13:15 Crew back onsite.
13:45 Crew partially backfilling W-136.
13:55 Crew placing the trench tape in trench W-136.
13:55 GP calls BR – GP and BR had a discussion this morning regarding SCS's decision to hydro seed the West side. GP informs BR that the specs call for seed and mulch. BR informs GP that hydro seeding is OK if that is the case.
14:00 GP calls Bob Mackey (BM) and gives him an update on the project. GP informs BM that he would speak to Jim Flynt (JF) and give him an update as well. GP & BM discuss the 8' trench depth on the lateral coming from W-136 to W-124 just North of the terrace.
14:15 GP on phone with Sandeep (SS) discussing trench depth.
15:00 Starting to rain. Crew backfilling trench at W-136. it is still drizzling steadily. No thunder or lightening.
15:25 Josh Adams (JA) offsite.
16:00 Crew has finished backfilling the trenches up to the T connection.
16:15 Crew calls it a day. Rain is getting heavier and the ground is getting slick and it is getting difficult to drive on.

16:20 Crew offsite.
16:25 GP calls BR – gives him project update and leaves site.
17:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, July 16, 2008.
Temperature: 85° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

07:30 Gautam Patwardhan (GP) on way to site.
08:10 GP onsite; meets Josh Adams (JA) near the scale house; JA informs GP that the ground is wet and it is too dangerous for the truck to move on the slopes. Crew fears equipment might slide downhill. SCS plans to do some damage control and fabrication work for a while and assess situation a little later in the day. There is an 80% chance of rain today and it rained all night yesterday.
08:30 GP calls Bill Routh (BR) and gives him an update. GP on Cell I. rest of crew not here.
09:00 Crew onsite. GP talking to Dusty Adams (Du.A) who informs GP that they will get all the fabrication done on the lateral running down from W-124 to the header. They will also set the pipe along the proposed trench and get it under pressure today. They will not trench as it is expected to rain this afternoon.
09:15 Backfill soil coming in onsite.
10:00 Crew moving pipe, setting it along the trench. GP calls BR – gives him an update and goes to his trailer to work on field dailies.
11:00 **Crew starts pressure test on the lateral running from W-123 to W-124 & W-136 to W-124 all the way to the header @ 10.2 psi @ 86° F.**
12:30 GP checks the pressure on the pipe. **It is at 10.3 psi @ 89° F. Pressure test OK.**
13:00 Backfill soil coming in. GP working on dailies.
14:00 Crew expecting rain in the afternoon – call it a day.
14:15 GP calls and informs BR – leaves site.
15:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, July 17, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

07:00 Gautam Patwardhan (GP) on way to site.
07:45 GP onsite; calls Bill Routh (BR) and leaves him a voicemail.
07:50 GP on Cell I – crew there already. No work is going on as the ground is wet & soggy. It rained quite heavily last night.
08:00 GP calls Dusty Adams (Du.A) who informs GP that crew won't work today as ground conditions are not ideal.
08:15 GP calls and informs BR – meets BR and hands him some dailies.
08:45 GP offsite.
09:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, July 21, 2008.
Temperature: 96° F, Hot, Humid, & Chance of afternoon thunderstorms.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, John Deere 250D Dump Truck.

06:30 GP leaves for office.
06:45 GP at office, picking up documents.
07:05 Gautam Patwardhan (GP) on way to site.
07:50 GP onsite; calls Bill Routh (BR) and informs him that crew will be working today. Crew has not worked since Thursday as they got rained on.
08:00 Crew will use 2 dump trucks to try to speed things up. They have a John Deere 250D dump truck onsite besides the other equipment.
08:15 Pipe load coming in. it is 6" JM Eagle 6 IPS SDR17 PC100 PE3608 345464C ASTM F714 – C3 AWWA C906-99.
08:40 Backfill soil coming in onsite.
09:00 GP talks to DA – informs DA that there is a fill all the way from W-124 to the header tie in. There is a 1' cut at the tie in location.
09:30 Crew trenching up from header tie in to well W-124. The header at the existing tie in is ~ 2' deep.
10:00 GP talking to DA. GP and DA go talk to the surveyors – inquire about previous survey and survey notes. GP and DA want to make sure surveyors have staked the jog on the 6' lateral at W-138 & W-140. Surveyors say they have; GP and DA double check – stakes are in the ground.
10:30 DA calls Jackie at Webb Surveyors – asks for construction notes and survey map to be sent to SCS and S2li.
11:00 DA offsite for doctor's appointment.
11:30 Crew done trenching from tie in to W-124.
11:45 Crew breaks for lunch.
12:30 Crew back onsite.
13:00 Crew laying some more bedding soil in the trench. GP checks bedding soil. It is ~ 6".
13:30 Crew placing pipe in the trench. The fall on the pipe is greater than 3%.
14:00 Crew backfilling trench from tie in to W-124. they will leave the end near the tie in open as they need to make the connection to the header.
14:30 Crew placing trench tape in the trench.
15:00 Crew continues backfilling and compacting.
15:30 Crew moves over to locate the header at the tie in location for the lateral coming down from well W-125.

15:45 Crew ~ 25-30' East of W-124 tie in.
16:00 Crew finds the existing header and the airline. Crew starts trenching uphill towards W-125.
16:30 There is no cut from the tie in all the way to W-125. Crew will keep the trench at a minimum depth of 3' to protect pipe from heavy equipment.
17:00 Crew continues trenching uphill to W-125.
17:30 Crew stops for the day. They have trenched ~ 15' on the W-125 lateral.
17:35 GP calls BR – leaves site.
18:30 GP home.

NOTE: DA informs GP that seeding and mulching was done on Friday and over the weekend. DA was offsite after 11:00 am.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, July 22, 2008.
Temperature: 91° F, Hot, Humid, & Chance of afternoon thunderstorms.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, John Deere 250D Dump Truck.

06:45 Gautam Patwardhan (GP) on way to site.
07:25 GP onsite; calls Bill Routh (BR) and informs him that S2li is onsite.
07:35 Crew about to start trenching on W-125.
08:00 Crew proceeding a little faster today as they are using 2 off road trucks.
08:30 Crew hauling trash.
09:00 Crew has trenched from the tie in location to well W-125.
09:30 Crew continues to trench uphill from W-125 to W-137. They stay West of W-125 and sweep onto W-137 in order to avoid the location of the down comer pipe.
10:00 Crew continues trenching and hauling trash.
10:30 Crew bedding bottom of the trench. Trench is ~3' deep from top of bedding soil.
11:00 GP informs Dennis Adams (DA) to stay a little deeper North of the second terrace on way to W-137.
11:30 DA keeps trench down to 4', North of second terrace.
11:45 Crew continues trenching to W-137.
12:00 Crew has trenched up to W-137. Break for lunch.
13:00 Crew back onsite. It is raining heavily. Thunder and lightening in the distance.
13:15 GP goes to attend construction meeting. Crew waiting out the rain.
13:30 GP at meeting.
14:30 GP on Cell I with DA and Robert Butler (RB).
14:45 Crew fusing pipe. It has stopped raining.
15:00 Crew hauling pipe downhill. They have fused the lateral from W-137 to W-125 to the header tie in. GP checks bedding soil to make sure it didn't wash out in the rain.
15:15 Crew placing pipe in the trench. It is a 4" line.
15:30 Crew inserting HDPE riser at W-125.
16:00 DA starts backfilling.
16:30 Crew inserting risers at grade changes to shoot as built points.

17:00 Crew laying trench tape in the trench.
17:15 GP calls BR – leaves him a voicemail and leaves site. Crew will be backfilling for another half an hour.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, July 23, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, John Deere 250D Dump Truck.

06:45 Gautam Patwardhan (GP) on way to site.
07:30 GP onsite; it is raining heavily.
07:45 GP and crew on Cell I.
08:00 GP and Dennis Adams (DA) talking – DA says it has rained for the past 6 hours and the ground is too wet to get heavy equipment on the slopes.
08:15 Crew calls it a day.
08:30 GP talking to Bill Routh (BR) – gives him an update.
08:45 GP takes some pictures and leaves site.
09:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, July 24, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck, John Deere 250D Dump Truck.

06:30 Gautam Patwardhan (GP) calls Dennis Adams (DA) – asks about working today. DA at the hotel, says he is heading to site in 5 minutes. Crew will try to trench today, depending on site conditions. If not, they will do 2 tie ins and pressure test.
06:45 GP leaves for site.
07:35 GP onsite.
07:40 Crew had tried to air up the line coming down from W-137 to the header. The line did not hold pressure. They are digging up the pipe to find the leak. It seems to be a big leak as the pipe is not retaining any pressure.
08:00 GP calls Bill Routh (BR) – leaves him a voicemail update.
08:15 Crew still digging, looking for leak.
08:30 Crew finds the leak. It is a big hole possibly done by a forklift during loading unloading. It is approximately midway between well W-137 & W-125.
08:45 Crew cuts the pipe section with the hole in it. Crew will add another piece of pipe and butt fuse it to the original pipe.
09:00 Crew fusing the piece of pipe to the lateral.
09:30 Crew at the tie in location for lateral W-123, W-124, & W-136. They will connect this lateral to the header.
09:40 **Pressure test started on lateral W-137, W-125 to header @ 10.2 psi @ 89° F.**
10:00 Crew cutting the header to insert the T fabrication for lateral W-123, W-124, W-136.
10:15 Crew fusing first electro fusion coupling (8") connecting the T to the header.
10:30 Crew fusing second electro fusion coupling (8") connecting the T to the header.
10:45 Crew fusing third electro fusion coupling (6") connecting the T to the lateral.
11:00 Crew moving to connect lateral W-137, W-125 to the header.
11:05 GP checks the pressure on the pressure test. **It is 10.2 psi @ 89° F. Pressure test OK.**
11:15 Crew cuts header to insert T fabrication.
11:30 Crew fusing (butt fusing) 4" lateral to T fabrication.
11:45 Crew fusing first electro fusion coupling (6") connecting the T to the header.
12:00 Crew fusing second electro fusion coupling (6") connecting the T to the header.
12:15 Crew breaks for lunch.
13:15 Crew back onsite. Hertz Rental has been onsite to pick up the small John Deere Dump Truck.

14:00 Hertz offsite. Crew will fuse 6" pipe for the North South lateral on the East hill and backfill trench W-123, W-124, W-136 & trench W-125, W-137.
14:30 GP calls BR and leaves site.
15:15 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, July 25, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:00 Jared Thomas (JT) left home. Pick up new notebook from office and get gas.
07:15 Arrive onsite. Josh Adams (JA) onsite. Called Bill Routh (BR) to inform that JT is onsite.
07:30 Chris and Dusty arrive onsite.
07:50 Work on trench started at header tie in. Trench will run North South for lateral W-126, W-138, W-140, W-133.
07:55 Header on South end located. Cutting trench towards W-126.
08:15 Informed Dennis Adams (DA) about cut after W-126. Asked DA about additional 3' cut behind header, deemed impractical to do by DA.
08:25 Received call from BR; informed BR that work had started and expected progress for day. BR asked if any air tests needed to be done, JT stated that he was not aware of any. BR available onsite to assist whenever needed.
08:35 Trenching paused while waiting for dump truck to return. JT leaving trench to inspect pipe stringing.
08:40 Crew stringing 6" pipe. JT couldn't confirm manufacturers name on the pipe.
08:50 Called Bob Mackey (BM) for advice on potentially different brand of pipe; BM asked JT to confirm manufacturer with DA.
08:55 DA confirms that the pipe manufacturer is ISCO and that it is the same manufacturer as the one used for previous pipes.
09:05 JT leaving stringing; returning to trench.
09:30 DA informs JT regarding work plan: Friday – trench to top of hill, lay pipe and backfill, Saturday – well heads and some backfilling, Sunday – no work, Monday – tie in for Cell 9, Tuesday – resume trench work.
10:00 Trenching nearing W-126. Depth ~3'.
10:20 Excavating around W-126.
10:55 Reminded DA that cut needs to be 4' deep for ~10' past terrace behind W-126.
11:25 Left site for lunch.
12:35 Back onsite.
12:50 Work resuming.
14:00 Trench approaching W-138. Patches of fly ash slowed progress from a bit past the terrace behind W-126 to the top.
14:20 Laying pipe in place.
14:30 Applying cover and magnetic tape.

14:35 JT advised placing risers at grade breaks.
15:05 Cover placed over pipe.
15:20 JT asked DA whether using previously excavated fly ash was acceptable; DA says it is and he will break up larger pieces
15:25 Called BM regarding validity of fly ash and a new contact number for Jim Getting (JG) 850-803-3509. BM accepts fly ash provided as there is no waste and it is broken up.
15:40 Only backfilling activities remain for the day. Called BR to inform that JT is leaving.
15:50 JT leaving site.
16:30 JT arrived at office.

(Gautam S. Patwardhan)

PS: As reported by Jared Thomas, typed by Gautam Patwardhan.

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, July 30, 2008.
Temperature: 90° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:15 Jared Thomas (JT) left home for site.
07:05 Arrive onsite. Josh Adams (JA) onsite. Called Bill Routh (BR) to inform that JT is onsite.
07:15 Dennis Adams (DA) onsite.
07:20 Inspected N-S lateral backfilling. Rest of crew onsite.
07:30 Spoke with DA who informed that work will be on header on East side.
07:35 SCS holds safety meeting.
07:40 JT inspecting stakes – stake numbers do not coincide with provided tables. Called Sandeep (SS) for assistance. Misnumbered stakes believed to correspond to actual points (Ex: 1510 = 1344). Spoke with DA – updated survey information sent to GP. Called SS asked him to check GP's email for survey info.
08:30 Crew attempting to locate header junction in SE corner. No slope provided between junction and point 1295. JT directed crew to use 3% minimum.
08:35 JT noticed that stakes 1295, 1294, 1293, 1292 are missing. Spoke with GP regarding survey info. GP has not received any. SS calls confirms no survey info. JT asked about missing stakes. SS wants to defer to BM. BM currently in meeting, might take half an hour.
08:45 JT spoke with DA regarding missing survey data.
08:50 DA calling office about it, DA not concerned with missing stakes from header junction in the SE corner to W-127 tie in. Work paused while calls being made.
09:05 DA is not worried about missing stakes. DA intends to continue trenching with ~ 4.81% slope as that slope is continuous until W-127 lateral tie in.
09:15 JT walking rest of the line to confirm stakes present. Tie in from W-129 to proposed header changes from 1500 series to 163.
09:35 BR arrived onsite. JT and DA explaining situation. DA intends to dig to W-127 tie in stake.
09:50 BM onsite. BM evaluating situation.
10:00 Work has halted until corrected survey information is made available. BR will attempt to print them out from field office.
10:30 BM has agreed to allow SCS to trench from flange to W-127 tie in provided it is deeper not shallower

10:35 BM conveyed OK to dig to BR and DA. BM offsite. Construction resuming, grade being checked with laser. JT reminded crew that grade must occur based on 6" bedding fill.
11:05 Leachate puddle found; not likely to be entering ground water, occurred about 20' away from flange connection.
11:30 Break for lunch
13:00 Back onsite.
13:20 Received call from BR, gave him an update.
13:40 Started raining.
13:50 Rain slowing down. Trenching will continue.
15:30 Received call from BM asking JT to pick up Orange County's Biennial Report from the solid waste office.
15:45 Lightening approaching.
16:30 Lightening appears to have passed. Trenching paused while waiting for the truck. JT goes to pick up report.
16:45 JT back onsite.
17:10 Total loads for the day = 13.
17:15 Trenching done for the day ` 150' trenched. JT observed sloping. Slope is ~4.8% throughout first 125' or so.
17:20 JT leaving site – called BR.
18:00 JT back at the office.

(Gautam S. Patwardhan)

PS: As reported by Jared Thomas, typed by Gautam Patwardhan.

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, July 31, 2008.
Temperature: 87° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:15 Jared Thomas (JT) left home for site.
07:00 Arrive onsite. Called Bill Routh (BR) to inform that JT is onsite. GP had not received any survey info last night; neither had BR at this time. JT will not permit crew to trench beyond W-127 tie in until survey has been received and reviewed by engineers. Work can continue for lateral on top.
07:10 Dennis Adams (DA) onsite. JT informed DA that GP & BR have not received any survey info; JT stated that work beyond W-127 tie in won't be allowed.
07:15 DA says he will have survey info sent to BR sometime after 08:00 am.
07:20 Rest of crew onsite; work resuming.
07:40 A 1" line in a sleeve was noticed just East of the trench near the bottom yesterday. DA is going to scrape the area to make sure it is not an active pipe. Pipe is not active, just waste.
07:50 Received call from BR, he still hasn't received anything.
08:20 BM called; he had not received any survey. BM ok with stopping trench at W-127 tie in and resuming lateral on top.
09:20 Reached W-127 tie in and stopped trenching. Called BM. BM has received the email but he hasn't had a chance to review it.
09:30 Called GP about jog on lateral at top of the landfill. GP says it's staked, however JT expects same issue with numbering as on header. JT will confirm numbering.
09:45 Received message from BR. BR forwarded email to BM 45 minutes ago.
09:55 JT confirmed that the numbers for the lateral are incorrect.
10:00 Crew laying 8" header pipe.
10:20 Received call from SS who is reviewing the survey info and has noted a problem at point 1345 (staked as 1539), slope is negative when it should be positive, SS will confirm with DA and figure out what was conveyed to the surveyors.
10:30 Crew laying 2" air line.
10:35 SS called; asked JT to locate point 1539. JT could not find it. Stakes in area where 1539 should be range from 1511 – 1513. SS will call surveyor about discrepancy.
10:55 Jim Flynt (JF) arrived onsite; JT gives JF an update.
11:00 SS called. He spoke with the surveyors, all points in the field have correct cut/fill numbers. Info sent from surveyors to SS had incorrect slopes. SS gives his OK to continue header, but OK will not be given to SCS until BM reviews and gives the go ahead. Also, SS says surveyor did not receive points provided by S2li to SCS.

11:05 Crew cutting T into header line for W-127 tie in.
11:10 Crew breaking for lunch.
11:50 SS called; contractor has OK from BM to proceed on header. DA informed of the same.
12:25 JT back onsite. Called BR – gave him an update.
12:50 Observing backfilling. Backfill contains some waste, potentially from scrapping bottom of the pile. JT directed removal of debris as soil was dumped.
13:10 Thunder may be approaching.
13:30 JT pointed out that excavator had buried pipe before tape was across. Digging out by hand.
13:35 Tape found and extended beyond limits of backfill. DA offsite to get CMP.
13:50 JT called DA regarding work for the day; only backfilling to be done. JT leaving site. Called GP to inform that he does not need to be onsite.
14:30 JT back at the office.

(Gautam S. Patwardhan)

PS: As reported by Jared Thomas, typed by Gautam Patwardhan.

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, August 1, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) leaves home for site.
07:00 GP gets a call from Dennis Adams (DA) – informs DA that GP will be onsite soon.
07:30 Arrive onsite. Backfill soil coming in.
07:45 Crew trying to shoot elevation at point 1344 with transit.
08:00 Transit is fogged up. Crew will have to use the laser. GP calls Bill Routh (BR) – informs him that S2li is onsite. Talks about the survey mess up.
08:30 Crew tries to shoot points 1242 & 1344 using a laser to get slope. Crew comes up with 3%. Crew needs to be at 3.74%.
09:00 Crew gets the transit to work. Shoot slope from 1242 to 1344 and get 2.6%. They need to maintain 3% minimum. Crew will go back to 1242 and cut some more.
09:30 GP calls Sandeep (SS) – checks if survey data is in as points in the field don't correspond to points on the sheet. SS informs GP that the surveyors sent some data but there were mistakes. The points on their drawing don't match the points on the field which in turn don't match the points on S2li's sheet. During conversation it was realized that the surveyor's shot 1343 (S2li) labeled 1510 as the first point North of the header tie in. the rest of the points in between the tie in and South of 1343 are missing. GP and SS decided that SCS should be minimum 3% and 5.5' deep approaching 1343 as a downcomer crosses on top just South of 1343.
10:00 GP discusses with DA and informs him to be 3% minimum and 6' deep approaching 1343 (1510 in the field).
11:00 Crew trenching towards 1343.
11:30 Trench depth at 1343 ~ 6'.
11:45 Crew breaks for lunch.
12:30 Crew back onsite.
!3:00 GP & DA walk along the center line that the surveyors staked. GP does not see any markings on the stakes in the ground. Tells DA that they cannot determine cut/fill numbers unless the surveyors tell S2li what the stake numbers are.
13:30 Calls SS. Inform SS that crew has invert elevations marked on the stakes till intersection of downcomer N-N with the header. GP and SS decide it is ok to trench past the road as long as a minimum slope of 3% is maintained and get a 6' depth at point 1540 in the field which is the intersection of N-N with the header.

SS tells GP that he has got no info from the surveyors yet. Surveyors are supposed to tell S2li the correlation between their numbering system and S2li's numbering system.

13:45 GP walks the centerline and finds a high point stake. It is S2li point 1245.

14:00 GP calls the surveyors – speaks with Jessi. Asks about information update. Jessi says he has not received anything from S2li. GP informs Jessi that S2li has sent the info to Webb twice and even got an acknowledgment for the same. Jessi then says that the emails are received by someone else and transferred to him. GP informs Jessi that that is an internal problem and Webb shouldn't be blaming S2li for not receiving information.

14:30 GP call Ss – updates him about the chat with the surveyors. Also tells SS that he found a high point in the field. Distance from high point to downcomer intersection at 1540 is ~ 200'. GP and SS decide to stay 6' deep at 1540, ~ 6' deep at 1513 (field) and gradually come up to 5' at 1347. from 1347 to the high point, crew can have a 3.5' trench depth.

15:00 Beginning to rain. Crew cleaning up.

15:30 GP calls BR – leaves voicemail.

15:40 GP offsite.

16:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Saturday, August 2, 2008.
Temperature: 89° F, Hot, Humid, & Windy.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves home for site.
07:20 GP onsite. Crew getting ready to trench across the road.
08:00 GP calls Bill Routh (BR) – updates him about the surveyor's internal communication lapse and informs him that S2li is onsite.
08:30 Crew digging on the access road. They have to break through the hard fly ash layer.
09:00 Fly ash is about 3' deep. Crew maintaining approximately 6' depth across the road.
09:30 Crew trenching on the road. They are ~ 20' across the road.
10:00 Apex Engineering onsite.
10:30 Crew almost across the road, nearing point 1341.
11:00 Crew taking survey shots to get the slope change. Crew has 2' grade change from the center of the road to the North edge of the road (about 50' length) i.e. a fall of 4%.
11:15 Continue digging about 10' North of the road. Reach point 1341.
11:30 Crew breaks for lunch.
12:00 Crew back onsite.
12:15 Crew inserting 8" header inside the CMP. They will try to fit the CMP collar on the ground.
13:00 Crew has placed 60' of CMP around the 8" header and put it together with metal collars.
13:15 Crew fusing 8" pipe passing through the collar to the 8" header line on the South side of the road.
13:30 Inserting the 2" air line inside the casing.
13:45 Crew has placed the CMP with the 8" header and the 2" air line inside the trench.
14:15 Crew backfilling trench.
14:30 Crew placing magnetic tape and risers in the trench.

15:00 GP calls BR – leaves him a voicemail about work progress and also informs him that he is leaving the site. Crew plans to be here for another hour and will continue backfilling.
15:15 GP offsite.
16:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, August 4, 2008.
Temperature: 92° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves home for site.
07:20 GP onsite. Some crew member's onsite. Josh Adams out to get fuel. Dennis Adams (DA) at Polk County.
07:45 Crew fusing connections.
08:00 GP calls Bill Routh (BR) and informs him that S2li is onsite.
08:15 Surveyor's onsite. GP walks the header route with Scot (crew chief) and asks Scot to provide Northing, Easting and ground elevations of stakes already in place. Once GP gets that info, he will check and let Scot know if more points are needed.
09:00 DA onsite. GP & DA drive around the header route; checking existing stakes.
09:15 SCS holds Health & Safety meeting.
09:30 Crew starts trenching. Crew moving from S2li point 1341 towards down comer N-N.
10:00 GP talking to Scot. Scot provides GP with information about survey stakes on the ground. GP & DA OK with the information.
10:30 Surveyor's offsite. Crew continues trenching.
11:30 Crew breaks for lunch.
12:00 Crew back onsite.
12:30 Crew has trenched till the intersection of Down comer N-N. Trench is approximately 6' deep.
13:00 Hewitt Construction onsite.
13:15 Hewitt Construction offsite.
13:30 Crew continues trenching. GP informs crew to stay deep as there is a stormwater inlet just North of the downcomer N-N intersection. Trench depth is about 5.5'.
14:30 Hewitt Construction onsite.
14:45 Hewitt Construction offsite.
15:00 Crew has trenched approximately 100' North of the downcomer N-N intersection. GP informs crew to be ~ 5' deep as they are nearing S2li point 1347.
15:30 Crew stops trenching for the day.
15:45 Crew laying header line and air line in the trench.
16:00 Crew making a T connection for W-128 at the header tie-in.
16:30 Crew backfilling.

17:00 Crew lays magnetic trench tape approximately 1" from the header line.
17:15 GP talks to DA, calls BR and leaves site. Crew will continue backfilling for another 30 minutes.
17:20 GP offsite.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, August 5, 2008.
Temperature: 94° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves home for office to pick up drawings.
07:00 GP on way to site.
07:45 GP onsite; calls Bill Routh (BR) and checks in.
08:00 Crew trenching from S2li # 1347 to the high point. Crew will stay 4' deep throughout.
09:00 Crew continues trenching.
09:45 Crew at high point. Trench slope greater than 3.5%.
10:00 GP goes to attend meeting.
10:20 Done at the meeting.
10:30 GP calls Sandeep (SS), reconfirms downcomer diameter. Verifies and makes sure crew needs to trench according to the header depth column in the table.
10:45 Crew continues trenching.
11:15 Crew breaks for lunch.
12:00 Crew back onsite.
12:15 Crew trenching from high point to S2li # 1364. GP informs crew to stay 3-4' deep all the way to #1364.
13:00 Crew has trenched approximately 10-15' North of the high point.
14:00 Crew continues trenching and hauling trash. There is practically no cover in this section of the landfill (from high point down to Well W-130).
15:00 Crew about 10' South of W-130 tie in to the header. Crew has trenched from the high point to W-130 at a slope greater than 3.5% and the trench is approximately 3-4' deep.
15:15 GP calls SS – discusses forcemain detail. GP and SS conclude that the 2" pipe shown on the detail is backwards. Also discuss 90 turn on the T and the possibility of running the 2" airline approximately 30' beyond the high point and attaching it to the lateral coming from W-129. decide to have a conference call with Bob tomorrow.
16:00 Crew backfilling & placing magnetic tape.
16:30 Crew placing the risers for as-built survey shots.

16:45 GP checks the riser locations.
17:00 GP calls JF – leaves him a voicemail and leaves site. SCS to stay onsite for another 45 minutes.
17:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, August 6, 2008.
Temperature: 94° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 GP on way to site.
07:30 GP onsite; SCS crew onsite.
08:00 GP calls Jim Flynt (JF) and checks in.
08:15 SCS has 2 men at the Class III landfill getting ready to trench. Two of the guys are at Cell 9, fixing a cleanout.
08:30 Dennis Adams (DA) at the Northeast corner, cutting and flattening weeds.
09:00 GP walking onsite, looking at stakes in the ground.
09:45 Downcomer pipe location for K (1527 in field) needs to be moved 25' North, 1528 needs to be moved 12', and 1530 needs to be moved 8'.
10:15 GP talks to DA and explains situation. Informs him about moving points.
10:30 Crew trenching around the NE corner. GP asks DA to maintain 3.5% slope and stay at least 4' deep.
11:00 JF onsite.
11:15 JF offsite.
11:30 Crew trenching near S2li #1365. There is still no cover on this side of the hill.
11:45 Crew hauling trash.
12:15 Crew breaks for lunch.
13:15 Crew back onsite.
14:00 Crew trenching @ 1368. Trench is approximately 4' deep.
14:30 Crew hauling trash.
15:00 Crew trenching @ 1369. GP checks to make sure fall is greater than 3% and trench depth is at least 4'.
15:30 Crew at downcomer L-L and header intersection. Trench still 4' deep. Slope on the instrument set at 4.2%.
16:00 Crew trenching past 1370. There is a lot of cover at this location.
16:30 GP asks crew to set the slope a little steeper as the trench depth needs to be 6' below grade at CT-5 (1253). Crew sets slope at 7.5%.

17:15 Crew trenching at 1371.
17:45 Crew has trenched past 1371 and is about 10' away from CT-5.
18:00 Crew stops for the day. GP calls JF – leaves voicemail and leaves site.
18:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, August 7, 2008.
Temperature: 94° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite; SCS crew onsite.
07:30 Crew fabricating T at W-130.
07:45 GP calls Jim Flynt (JF) and checks in.
08:15 Crew clearing weeds, compacting previously filled areas.
08:45 Crew fusing and laying header in the trench at pipe bend in the NE corner.
09:30 Crew fusing and placing header near 1370.
10:00 Crew placing air line and condensate line in the trench.
10:30 Crew backfilling trench.
11:00 Crew continues to backfill.
11:30 Placing trench tape in the trench.
12:00 Backfilling and compacting to grade.
13:00 Break for lunch.
14:00 Back onsite.
14:30 Begin trenching near CT-5.
15:00 Crew at CT-5. Depth of the header invert is 6'.
15:15 Crew at 1254. Crew gets level and shoots elevations on the hub. It is 7.15'. Adds a 0.89' cut from the hub and shoots the ground in the trench. After adding bedding soil, bottom elevation in the trench is 8.02' ~ 8.04' OK. 8.02' is actual trench bottom elevation. 8.04' is surveyor's elevation (7.15' + 0.89').
15:30 Crew sets laser to 3.3% uphill slope and continues trenching uphill.
16:00 Crew trenching towards 1377.
16:30 Crew about 10' away from 1377. Trench depth is about 5.0'.
17:15 Crew at 1377. Stops for the day.
17:20 GP calls JF – leaves voicemail & leaves site.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, August 8, 2008.
Temperature: 89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) leaves for site.
07:30 GP onsite; SCS crew onsite. Chris Boggs not onsite – will be in later today.
07:45 Crew moving backfill soil down to the trench and piling it there, so it is easier to backfill.
08:10 GP calls Jim Flynt (JF) and checks in.
09:00 Crew trenching past 1378 (Depth 5.5').
09:30 Crew trenching past 1379 (Depth 5.5').
10:00 Crew trenching past 1380 (Depth 5.5').
10:30 Approaching point 1255; i.e. W-132 lateral to header tie in.
11:30 Crew breaks for lunch.
12:30 Back onsite. It is dark and raining heavily.
12:45 Crew waiting out the storm.
13:00 Crew trenching, approaching 1383.
13:30 GP calls JF – informs him that SCS will be backfilling tomorrow and as such S2li probably doesn't need to be onsite. JF gives OK for S2li to not be onsite during backfilling.
13:35 GP calls Jared Thomas (JT) – informs him that he doesn't need to be onsite tomorrow.
14:00 Crew getting closer to 1384.
14:20 Chris Boggs onsite.
14:30 Crew at 1384. GP will double check invert elevation. Crew has been coming up at 3.3% from 1254 to 1384. The cut on the hub is 12.24'. Instrument height is 2.7'. So trench depth needs to be 12.24' + 2.7' = 14.94'. Actual trench depth measured is 14.5'. Crew is off by 6" (OK).
14:45 Distance from 1384 to 1408 is 134'. Invert elevation change is 8.5'. Crew will set laser at 6% to get the desired elevation change at 1408.
15:00 GP moves stakes for downcomer K-K, 1386, 1266, & 1408.
15:45 Crew at downcomer K-K location; hauling trash.

16:00 Crew stops for the day; approximately 316' of trench dug today.
16:02 GP calls JF – checks out and informs him that SCS will be here tomorrow and on Sunday and will be backfilling and inserting the 10" sleeves on the wells.
16:10 GP taking pictures.
16:15 GP offsite.
16:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, August 11, 2008.
Temperature: 92° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:20 GP onsite; SCS crew coming in.
07:30 Crew setting up the laser; getting ready to trench.
07:40 GP calls JF and leaves him a voicemail.
08:15 Crew trenching at 1386; going uphill at 6%.
08:45 Crew trenching at 1266. GP checks current elevation of the trench with the surveyor's elevation. Height of instrument = 3.44'. Cut required to get invert elevation = 14.94'. Total calculated elevation = 18.38'. Actual trench elevation = 18.08'. Crew off by 3" (OK).
09:15 Crew trenching at 1408.
09:30 Next station available is 1267 which is about 200' away. There is a 15' elevation change between current station and 1267 i.e. 7.5% slope.
09:35 Crew will continue at 6% for a while beyond 1408, check elevations and make adjustments to meet design elevation at 1267.
10:00 Crew trenching about 70' west of 1408. Adjust slope to 5% as trench is getting shallow.
11:00 Crew at W-134 (1267).
11:10 SCS safety inspector's onsite.
11:30 Crew trenching from tie in (1457) down towards 1267. Trenching at 4% slope.
12:15 Crew breaks for lunch.
13:15 Crew back onsite.
13:30 Continue trenching downhill from tie in location.
14:30 Crew comes downhill and meets the other trench at W-134.
15:00 Fusing 8" header line.
15:15 Fusing T fabrication (tie in) for big North South lateral South of W-133 on the header line.
15:45 Laying pipe in the trench.
16:00 Fusing 8" pipe to get sufficient length to reach the tie in point at the existing header.

16:30 Fusing T fabrication for W-134 lateral tie in.
17:00 Backfilling header trench partially.
17:15 GP calls JF – leaves him a voicemail. SCS will stay onsite and backfill till 18:00 hours.
17:20 GP leaves site.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, August 12, 2008.
Temperature: 89° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

08:00 Gautam Patwardhan (GP) leaves for site.
08:45 GP onsite; calls Jim Flynt (JF) and leaves him a voicemail.
09:15 Crew backfilling. GP came in late as crew were going to backfill trench (header trench) this morning. Expect to start trenching laterals around 10:30.
10:00 Crew clearing weeds to start trenching the North – South lateral from W-138 to W-140 to W-133 to the header tie in on the North side. They had trenched up to W-138 previously.
11:15 Crew breaks for an early lunch.
12:00 Crew has Health & Safety teleconference.
12:15 Crew back onsite; resumes trenching.
13:00 Crew trenching near W-138. GP & DA discuss lateral alignment.
13:30 GP & DA checking survey stakes. Crew is currently at 1172 (W-138). The next point North is 1395. Natural ground elevation change between the 2 points is 5'. The trench depth at W-138 is 3'. Crew will continue at 3.1% slope to 1397. At 1397 crew should have a trench depth of approximately 4.2', which is OK.
13:35 It is getting windy & dark.
13:40 Heavy rains across the landfill. Crew decides to wait out the rain.
14:05 Rain has stopped. Crew continues trenching.
14:45 Crew about 50' south of 1395.
15:30 Crew about 20' south of 1395.
16:00 Crew at 1395. GP checks elevation. Height of instrument = 4.08'. Cut on hub = 4.45'. Required elevation = 8.53'. Actual elevation at trench bottom = 8.12'. Crew is about 5" higher, which is OK.
16:15 Moving towards 1394 (High Point). Slope still at 3.1%.
16:40 Crew past the high point. Moving towards 1256 (W-140).
17:00 Crew about 20' away from 1256. Trenched approximately 200' today. Crew stops for the day.

17:05 GP calls JF and leaves him a voicemail.
17:15 Crew & GP offsite.
18:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Wednesday, August 13, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) leaves for site.
07:30 GP stops for gas.
07:45 GP onsite.
08:00 GP calls Jim Flynt (JF) and leaves him a voicemail.
08:15 Crew trenching. Crew has crossed the high point.
09:00 Crew trenching at W-140 (1246). Trench is 4' deep.
09:30 Crew about 30' north of W-140. They have to trench through fly ash about 1' thick.
10:00 Crew past 1391. trench is over 5' deep and the slope is steep (10%).
10:30 Crew at 1390. Still trenching through fly ash. Crew will change grade to meet header at 1266.
11:00 Crew about 10' south of 1389. Slope a little less steep now; still greater than 3%.
11:30 Crew at 1388. Breaks for lunch.
12:30 Back onsite. Continue trenching towards W-133.
13:00 Crew at W-133. Trench is over 5' deep.
13:30 Moving towards 1266 (header tie in).
14:00 Crew completes trenching north south lateral and are at 1266.
14:15 Crew placing 6" pipe in the trench.
14:30 Crew short on 6" pipe. Go to Cell 9 to get about 40' of pipe.
15:00 Crew fusing 6" pipe. Part of the crew fusing 4" lateral from W-140 to the 6" pipe.
15:30 Crew starts filling air in the north south lateral for the pressure test.
16:00 It took 30 minutes to get the pressure up to 10.1 psi. Air test started on North South lateral @ 10.1 psi.
16:15 Pressure still at 10.1 psi. GP will leave site as SCS will be backfilling for the next hour. GP will check the air test tomorrow morning. GP calls JF and informs him that S2li is leaving site.
16:20 GP offsite.
17:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Thursday, August 14, 2008.
Temperature: 81° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite.
07:30: GP calls Jim Flynt (JF) and leaves him a voicemail. GP checks the air test on the North South lateral. It is at 10 psi. It was 10.1 psi last night, possibly due to temperature difference (88° F yesterday to 82° F today). **Air test started on lateral W-126, W-138, W-140, & W133 at 10 psi at 82° F.**
08:00 Crew backfilling the lateral.
08:30 GP checks the pressure on the north south lateral. **It is still 10 psi at 82° F. Pressure test passes on lateral W-126, W-138, W-140, & W-133.**
09:00 Crew backfilled north south lateral to W-133. Crew will leave stretch from W-133 to the header exposed to make the tie in connection.
09:30 Trenching at W-135. Crew has fused 2 300' laterals on top of the hill and will use them for W-135 & W-141.
09:40 **Air test started on lateral W-135 at 10 psi at 82° F.**
09:45 **Air test started on lateral W-134, W-141 at 10.1 psi at 82° F.**
10:30 Crew had trenched from W-135 to the header. GP checks the trench. Trench is 3' deep at W-135 and stays 3' deep till it hits the terrace. Slope is a little less steep after that and the lateral ties in to the new header approximately 5' away (East) from the old header to new header tie in. The pipe at the header is 1' deep as the old header has a 1' cover on it.
10:40 Crew starts trenching from W-141 to the header. GP talks to DA and instructs DA to stay about 5.5' deep at the south end of the terrace in between W-141 and W-134 as there is a 4' cut at that location.
10:50 **Air test OK on W-135 & W-134/W-141 laterals at 10 psi and 10.1 psi respectively. The temperature on both lines is 82° F.**
10:55 Steady drizzle onsite.
11:00 Crew starts air tests on 2 other laterals. GP will ask crew what wells these laterals are for. The laterals are on top of the hill, complete with risers and necessary fittings. **Air test started on lateral A & Lateral B at 10 psi at 83° F.**
11:30 Crew is trenching down from W-141 to the terrace. Will continue to trench uphill from the header tie in to W-134.
12:00 **Air tests OK on laterals A & B at 10 psi at 83° F.**
12:15 Crew breaks for lunch.

13:00 Back onsite.
13:30 Crew has trenched up to the terrace on the north side of W-134.
13:35 GP informs crew that they need to be 5.5' deep at the south end of the terrace. DA offsite to get CMP and other fittings.
14:00 GP checks crew progress. Crew has trenched to the south end of the terrace from W-141.
14:15 The trench is over 6' deep at the south end of the terrace. Crew will have difficulty matching the grade to the header.
14:30 Crew decides to reduce the depth by a foot. Trench will be approximately 5.5' at the south end of the terrace.
15:15 Crew has finished trenching from W-141 to W-134 to the header.
15:30 Crew inserting pipe in the trench.
15:45 Crew starts backfilling trench W-141/W-134 to the header. Place magnetic tape. Will come back and fill to grade later today.
16:00 Crew starts backfilling W-135 to the header.
16:10 GP talks to the crew and verifies that crew won't trench anymore today. GP calls JF and leaves him a voicemail.
16:20 GP taking pictures.
16:35 GP offsite.
17:15 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, August 15, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite.
07:35 Crew getting ready to trench W-132. GP goes to check. Informs crew that the trench must be 6' deep at W-132.
07:45 Crew going back to W-132 and trenching deeper. Josh Adams not onsite – will be in later.
08:00 GP calls Jim Flynt (JF) and leaves him a voicemail.
08:30 Calls Sandeep (SS) and Bob (BM) at the office to discuss forcemain tie in detail. Agree that forcemain should be besides the header – will discuss more when BM gets onsite.
09:15 Crew done trenching W-132.
09:30 Placing pipe in the trench.
09:40 GP checks pipe to make sure it is air tested. **Lateral A air tested yesterday will be used for W-132.**
10:00 Crew starts trenching W-131. GP informs crew to stay 4' deep at the south end of the terrace between W-131 and the header tie in.
10:45 Crew trenching down from W-131 to the header. They have trenched about 40' north of W-131.
11:00 Hauling trash.
11:30 Crew has trenched up to the terrace. The trench depth is approximately 4'. Crew will start trenching uphill from the header and meet the trench coming down from W-131.
12:15 Crew breaks for lunch.
13:00 Back onsite; continue trenching uphill.
13:20 Crew has trenched from W-131 to the header.
13:30 Placing pipe in the trench with an excavator.
14:00 Getting soil to backfill W-132. GP asks the crew to lower the HDPE riser at W-132 as it is sitting on a mound of dirt.
14:15 Crew starts backfilling W-131. No air test on W-131 yet.
14:30 GP calls the office and BM's cell to check BM's status.
14:50 BM onsite. Discuss progress talk about the forcemain. BM has no problem inserting forcemain on the 8X8 T connecting the lateral to the header as the lateral is 30'away from the high point. BM says he will discuss with JG to make sure.

15:00 Josh Adams onsite.
15:15 BM offsite.
15:30 GP taking pictures.
15:45 GP calls JF and leaves a voicemail. GP offsite. SCS will continue backfilling till 17:00 hours.
16:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Saturday, August 16, 2008.
Temperature: 87° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Gautam Patwardhan (GP) leaves for site.
07:15 GP onsite.
07:25 Crew moving equipment to start trenching W-139/W-129 lateral.
08:00 Crew trenching lateral & hauling trash.
08:05 DA offsite to Cell 9.
08:25 DA back.
09:00 Crew has trenched across the well W-129 and is halfway through the road.
09:15 DA gets laser to make sure he has the 3% minimum slope on the header across the road.
10:00 Crew trenching past the road towards W-139.
10:15 Crew had started an air test yesterday at 13:00 hours at 10 psi. GP checks the pipe. It is at 10.1 psi. GP will monitor the pie for an hour for documentation purposes.
10:20 **Air test started on lateral to be used for W-127 at 10.1 psi at 84° F.**
10:30 Hauling trash.
10:40 Done trenching at W-139.
10:50 Placing pipe in the CMP casing – 40' of CMP being used.
11:00 Fabricating riser for W-129.
11:20 Crew backfilling road between W-129 & W-139.
11:30 **Pressure test started on W-139/W-129 lateral at 15 psi at 84° F.**
11:45 Crew breaks for lunch. Heavy rain onsite.
13:00 Crew back. Rain has washed some bedding soil off in portions of the ditch. **Air test OK for W-127 at 10.1 psi at 84° F.**
13:15 Crew pulls pipe out of the trench and is regrading ditch and adding bedding soil where needed.
13:30 **Air test OK on W-139/W-129 lateral at 15 psi at 84° F.**
14:00 Crew regrades trench and places pipe back in the trench.
14:15 Crew moves to start trenching W-127.
14:20 **Air test started on W-131 at 11 psi at 84° F.**
15:00 Slight drizzle onsite. GP taking pictures.
15:20 **Air test OK on W-131 at 11 psi at 84° F.**
15:45 Crew leveling trench at W-127. Trench is 3' deep.
16:00 Crew done trenching at W-127.

16:15 Crew will backfill W-127 and W-139/W-129 today. Crew will continue backfilling and start trenching lateral W-128 tomorrow.
16:20 GP calls JF and leaves him a voicemail.
16:30 GP offsite.
17:15 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Sunday, August 17, 2008.
Temperature: 90° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:30 Jared Thomas (JT) leaves for site.
07:15 JT onsite. SCS onsite – left message with Jim Flynt (JF) that S2li is onsite.
07:30 Dennis Adams (DA) says crew will spend morning putting on sleeves and well heads – afternoon activities will be based on morning progress.
07:45 Observing installation of sleeves and well heads.
09:45 Observing set up of header air test. SCS will use air line to pressurize header as opposed to compressor since it will be faster. Test will be done at 80 psi. JT checks specs and requests that test be 10 psi max.
10:30 Called GP – GP says 80 psi OK for header and airline test. JT relayed that 80 psi acceptable.
11:15 Leaving for lunch.
12:00 Back onsite.
12:50 Crew going to cut into existing airline at SE corner of site to tie in proposed air line.
13:30 Crew done tying in proposed air line to existing line with a T joint. Pressure in air line is 70 psi.
13:45 Pressurizing header line with air line – will go to 10 psi on header.
14:00 **Pressure test started on header from SE corner to CT-5 at 10 psi at 94° F.**
14:10 **Pressure test started on header from CT-5 to north tie in at 10 psi at 94° F.**
14:15 Pressure test on header to be left overnight and checked by GP tomorrow. JT leaving site, leaves message with JF.
15:00 JT back home.

(Gautam S. Patwardhan)

PS: Field daily as reported by Jared Thomas, typed by Gautam Patwardhan.

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, August 18, 2008.
Temperature: 86° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

07:00 Gautam Patwardhan (GP) leaves for the office.
07:15 GP at office, doing paperwork.
07:50 GP leaves for site.
08:30 GP onsite. Checks pressure on the header line. Looks good – will leave it on for an hour for documentation. **Air line is on test at 75 psi at 81° F.**
08:35 **Pressure test started on header line from SE corner to CT-5 at 10 psi at 81° F.**
08:40 **Pressure test started on header line from CT-5 to the north tie in at 10 psi at 81° F.**
08:45 Crew cleaning up and regrading slopes.
09:00 GP calls JF – informs him about progress and checks in.
09:35 **Pressure test OK on header line from SE corner to CT-5 at 10 psi at 81° F.**
09:40 **Pressure test OK on the header line from CT-5 to the northern tie in at 10 psi at 81° F.**
09:45 Crew fusing lateral from W-127 to header, making butt fusion.
09:50 **Air line OK at 75 psi at 81° F.**
09:55 Crew fusing lateral from W-139/W-129 to the header (butt fuse). Part of the crew preparing to connect laterals on the North side.
10:00 Crew electro fusing lateral W-132 to the header (4" lateral).
10:15 Crew electro fusing North South lateral to the header (6" lateral).
10:30 Crew electro fusing lateral W-141/W-134 (4 lateral) to the header.
10:50 Crew will be backfilling the trenches where the laterals tied in to the header. They will start trenching W-128 after backfilling the trenches. The trenches are being backfilled in anticipation of TS Fay.
11:20 Crew backfilling lateral W-127.
12:00 Crew breaks for lunch.
13:00 Crew back onsite.
13:10 **Air test started on lateral W-128 at 10.5 psi at 84° F.**
13:30 Crew backfilling W-127. Move to W-139/W-129.
14:10 **Air test OK on lateral W-128 at 10.5 psi at 84° F.**
14:15 Getting dark & windy.
14:30 Heavy rain onsite. No thunder or lightening.
15:00 Crew trenching at W-128. There is no cut on this lateral.

15:45 Crew trenching across the access road.
16:20 GP calls BM. BM had called earlier. GP & BM discuss progress. GP gives BM an update.
16:30 Crew has crossed the access road and is trenching towards the well.
17:00 Trenching complete for lateral W-128.
17:15 Crew placing CMP in the trench under the access road. Passing pipe through CMP.
17:30 Crew starts backfilling trench W-128.
17:45 Crew places magnetic tape. GP talks to DA. DA plans on working tomorrow, will try to tie in the header and connect the North South lateral on the East side to the header.
17:50 GP calls JF- leaves him a voicemail.
18:00 GP leaves site.
18:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, August 19, 2008.
Temperature: 78° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) leaves for the site.
07:30 GP onsite. Crew already onsite.
08:00 GP talks to Dennis Adams (DA) – discusses schedule for the day. Consistent drizzle onsite. DA informs GP that crew won't attempt to connect the header or lateral today – will work on fabricating the sump.
08:20 GP calls the office, talks to Sandeep (SS). GP and SS agree that the sump should stick up 5' from the ground as there is a 2' fill at the sump.
08:30 GP calls Jim Flynt (JF) and leaves him a voicemail.
08:45 GP instructs crew to raise the riser on the sump by 2'.
09:00 Crew fabricating riser. Everything being fabricated with SDR11 HDPE.
09:15 Crew drilling hole (4" dia.) in a blind flange for the 4" pipe.
09:45 Crew fusing 12" HDPE pipe (riser) which will stick out of the ground on to the 12" cross.
10:30 Crew preparing the transition pipe that will reduce the 12" diameter to 8" diameter in order to connect the header to the sump.
11:15 Crew preparing the transition pipe for the opposite end.
12:00 Crew preparing the 12" pipe that will connect to the bottom of the cross.
12:10 GP checks the length of pipe on top of the cross. It is 11.5'.
12:15 Crew breaks for lunch. GP asks DA about schedule for the day. DA says they will not dig the sump or connect the header or laterals. Crew might put some well heads on depending on the weather.
12:20 GP calls JF – leaves him a voicemail and leaves site.
13:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Friday, August 22, 2008.
Temperature: 85° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

12:30 Gautam Patwardhan (GP) leaves for the site.
13:15 GP onsite – crew getting ready to excavate for CT-5.
13:30 GP calls Jim Flynt (JF) and leaves him a voicemail.
13:45 GP inspecting sump. Length of pipe is 11'8" from top of CT-5 to the header invert. The pipe is 3'9" from the top of flange to the top of perforations. The length is 2' from the header invert to the flange. The bottom pipe is 6'10".
14:00 GP calls Sandeep (SS) and Bob (BM) to double check hole requirements on the sump. BM says 18 holes are too low.
14:15 GP asks crew to drill more holes. Crew drilling holes in the pipe. DA excavating.
14:30 Crew done drilling holes. Getting #4 stone.
14:40 The hole for the sump is 15' deep below the header invert.
15:00 Crew making more holes in the pipe. Placing sump down the hole. Raining heavily onsite.
15:15 DA filling hole with #4 stone.
15:30 GP asks crew to fill hole with #4 stone up to 5' from the header invert. Crew fills the hole with #4 stone up to 5' from header invert and places geotextile "donut" over the stone. Geotextile is too small for the hole. Crew goes to Cell 9 to get more geotextile.
15:45 Crew back with geotextile. GP calls JF – informs him that crew will be onsite tomorrow and that they are leaving for the day.
15:50 Crew places geotextile on the rock.
16:00 Crew adds bentonite after placing some general backfill on the geotextile. Crew fills the hole up to grade with soil.
16:10 Crew and GP leave site.
17:00 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Saturday, August 23, 2008.
Temperature: 88° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) leaves for the site.
07:15 Stops for gas.
07:45 GP onsite.
08:00 GP calls Jim Flynt (JF) and leaves him a voicemail.
08:15 Crew electro fusing NE header to the sump.
08:40 Crew electro fusing North header to the sump.
09:00 Crew electro fusing the 4" lateral from W-131 to the North header.
09:30 GP hands shop drawing submittals to DA.
09:45 Crew inserting elbows in the condensate and air line.
10:00 **Crew airs up condensate line for the air test at 10.3 psi at 88° F.**
10:10 **Crew airs up air line for the air test at 75 psi at 88° F.** (GP thinks this test has already been performed).
10:30 Crew moving to tie header to existing header at the North end.
10:50 Crew lifting new header with excavator and aligning it to tie in to the existing header.
11:10 **Pressure test OK on the condensate line at 10.3 psi at 88° F and pressure test OK on the air line at 75 psi at 88° F.**
11:30 Crew electro fusing header (8" coupling) to the T, which connects to the existing header.
11:50 Crew electro fusing 4" lateral from W-135 to the 8" T using 4" coupling and reducers.
12:30 Crew breaks for lunch.
13:30 Back onsite.
13:45 DA backfilling header trench near the North tie in.
14:00 Heavy rain onsite. Rest of the crew waiting out the rain.
14:15 Crew trying to locate the existing header to connect the North South lateral at the South end.
14:30 Crew locates the existing 10" header line.
14:50 Crew sanding edges of the 10" X 6" T to clean the ends.
15:05 Heavy rains onsite.

15:30 Crew waiting out the rain.
15:45 Still raining. Crew decides to call it a day.
15:50 GP calls JF – leaves him a voicemail.
15:55 GP and crew offsite.
16:45 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Sunday, August 24, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Dennis Adams, Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

07:00 Gautam Patwardhan (GP) leaves for the site.
07:45 GP onsite.
08:00 Crew fusing 1st 10" electro fusion coupling to connect T to the existing header.
08:20 Crew fusing 2nd 10" electro fusion coupling to connect T to the existing header.
08:45 Crew electro fusing 6" lateral to the T. Making the South header tie in for the North South lateral on the South side.
09:10 Crew excavating near the SE header tie in.
09:30 Crew cleaning existing header and T to make the connection.
09:45 The butterfly valve on the new header won't close. Crew disassembles the valve to put in some spacers. The valve was hitting the header pipe and wouldn't close.
10:00 Butterfly valve works after inserting the spacers.
10:15 Crew has fabricated a 10 X 8 T with the butterfly valve attached to it. Crew places the T in the trench.
10:45 Crew inserting 2 10" electro fusion couplings and 1 8" coupling on the T.
11:00 Crew fusing 1st 10" electro fusion coupling to connect T to the existing header (flare side).
11:15 Crew trying to fuse the 2nd electro fusion coupling to the T. Crew having problems with the Friatec machine which keeps giving an error code 5 (Computer chip too hot).
11:30 Crew still not able to fuse the 2nd coupling.
11:35 Try to fuse the 8" coupling on the new header to the T. the machine works and the crew electro fuses the 8" coupling.
11:45 Crew had electro fused the 2nd 10" coupling for about 300 seconds out of the 620 needed before the machine shut off. Crew will extrusion weld the coupling on either side to the header and T to make sure it doesn't fail.
12:10 Crew extrusion welding the 10" coupling to the header.
12:40 Crew extrusion welding the 10" coupling to the T.
13:00 Crew butt fusing the 2" air line.
13:15 Crew partially backfilling header tie in location.

13:45 Crew done backfilling and regrading for the day. Crew will be onsite tomorrow at noon.
14:00 GP calls JF – leaves him a voicemail and leaves site.
14:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Monday, August 25, 2008.
Temperature: 91° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

12:15 Gautam Patwardhan (GP) leaves for the site.
13:00 GP onsite. GP had called DA earlier at 11:00. DA said crew would be onsite around 13:00 hours to put the saddle on.
13:10 Part of the crew in. Waiting for rest of the crew.
13:20 GP calls Jim Flynt (JF) – leaves him a voicemail.
13:40 Rest of the crew onsite. DA not in today.
14:00 GP checks the cut/fill data to figure out the riser height.
14:30 Crew fabricating the risers.
14:45 Crew goes to Cell 9 to get 4" HDPE pipe.
15:10 Crew back.
15:30 Crew fusing the flanges to the pipe.
16:00 Attaching the 4" blinds.
16:15 Crew inserts the saddle machine over the header on the SE side to fuse 4 riser on top.
16:30 Starts raining. Lightening and thunder nearby.
16:35 Crew cleaning up – will continue tomorrow.
16:40 GP calls JF – leaves him a voicemail.
16:45 Crew & GP leave site.
17:30 GP home.

(Gautam S. Patwardhan)

S2li

Field Daily

Project: Class III Cell I Landfill Gas Management System Expansion.
Location: Orange County Landfill, Young Pine Road, Orlando, FL: 32829
Date: Tuesday, August 26, 2008.
Temperature: 90° F, Hot, Humid, & Clear.

Crew: Josh Adams, Dusty Adams, Chris Boggs (all SCS Field Services).

Equipment Onsite: 2 McElroy pipe fusing machines, Komatsu Excavator PC200 LC with 24" bucket, Positrack RC100 Skid Steer, Terex TA30 Dump Truck.

06:45 Gautam Patwardhan (GP) leaves for office.
07:00 GP at office. Working on shop drawing log.
07:25 GP leaves for site.
08:10 GP onsite. Crew onsite already.
08:30 GP calls Jim Flynt (JF) – leaves him a voicemail.
08:35 Part of the crew fusing saddle at the header tie in on the SE side. Rest of the crew backfilling near CT-5.
09:00 Crew fusing risers on the saddle.
09:15 DA continues to backfill.
09:30 Crew moves to connect 2" forcemain 20' South of the high point.
10:00 Crew heating up the 4" saddle to fuse it to the 8" header.
10:15 Crew fusing 4" saddle on to the header.
10:35 Crew electro fusing riser to the saddle. Crew also extrusion welds around the saddle for added strength.
10:50 Crew moving to fuse risers on the North South lateral on the South side of the hill.
11:05 Crew sanding the saddle to clean the edges.
11:30 Crew fusing 4" risers to the North South lateral on the South side of the valve (on the 10" T).
12:00 Crew breaks for lunch.
12:30 Crew back onsite.
12:45 Crew grinding/sanding saddle to clean the edges.
13:00 Crew heating the saddle and the 6" lateral.
13:30 Crew fusing the 4" riser to the 6" lateral on the North side of the valve. GP goes to attend meeting.
14:15 GP done at the meeting.

14:30 GP onsite taking pictures.
14:45 GP offsite.
15:30 GP home.

(Gautam S. Patwardhan)

APPENDIX B

PRESSURE TEST REPORT FORMS

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:15 AM
CONTRACTOR:	SCS Field Services	DATE:	06/23/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 100' in length, connecting well W-107 to the existing header.

T_i = Initial temperature in °C - 27.78 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.78	10	10	0
20	28.33	10	10.05	0.45
30	28.33	10	10.05	0.45
40	28.33	10	10.05	0.45
50	28.33	10	10.05	0.45
60	28.33	10	10.05	0.45

PASS/FAILURE: $P_c = 0.45 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:25 AM
CONTRACTOR:	SCS Field Services	DATE:	06/23/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 94' in length, connecting well W-106 to the existing header.

T_i = Initial temperature in °C - 28.83 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.83	10	10	0
20	28.83	10	10	0
30	28.83	10	10	0
40	28.33	10	10	0
50	28.33	10	10	0
60	28.33	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:30 AM
CONTRACTOR:	SCS Field Services	DATE:	06/30/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 22' in length, connecting well W-113 to the existing header.

T_i = Initial temperature in °C - 33.89 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	33.89	10	10	0
20	33.89	10	10	0
30	33.89	10	10	0
40	33.89	10	10	0
50	33.89	10	10	0
60	33.89	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:30 AM
CONTRACTOR:	SCS Field Services	DATE:	06/23/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 138' in length, connecting well W-105 to the existing header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10.3 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.11	10.3	10	0
20	31.11	10.3	10	0
30	31.11	10.3	10	0
40	31.11	10.3	10	0
50	31.67	10.3	10.35	0.44
60	31.67	10.3	10.35	0.44

PASS/FAILURE: $P_c = 0.44 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:45 AM
CONTRACTOR:	SCS Field Services	DATE:	06/23/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 115' in length, connecting well W-104 to the existing header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.11	10	10	0
20	31.11	9.4	10	6
30	31.11	9	10	10
40	31.67	8.6	10.05	14.39
50	31.67	8.2	10.05	18.37
60	31.67	7.8	10.05	22.35

PASS/FAILURE: $P_c = 22.4 > 1$ % - FAIL RETEST (yes/no): YES

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: Crew checked the fittings with soap water and a leak was detected where the metal pipe threads into the HDPE end cap. This leak will be fixed and the lateral retested.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	07:45 AM
CONTRACTOR:	SCS Field Services	DATE:	06/25/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 115' in length, connecting well W-104 to the existing header.

T_i = Initial temperature in °C - 28.33 °C
P_i = Initial test pressure in psig - 10.2 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.33	10.2	10.2	0
20	28.33	10.2	10.2	0
30	28.33	10.2	10.2	0
40	28.33	10.2	10.2	0
50	28.33	10.2	10.2	0
60	28.33	10.2	10.2	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1^{\circ}C = 70^{\circ}C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0^{\circ}C = 73^{\circ}F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	07:45 AM
CONTRACTOR:	SCS Field Services	DATE:	06/25/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 85' in length, connecting well W-103 to the existing header.

T_i = Initial temperature in °C - 28.33 °C
P_i = Initial test pressure in psig - 10.1 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.33	10.1	10.1	0
20	28.33	10.1	10.1	0
30	28.33	10.1	10.1	0
40	28.33	10.1	10.1	0
50	28.33	10.1	10.1	0
60	28.33	10.1	10.1	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	10:55 AM
CONTRACTOR:	SCS Field Services	DATE:	06/25/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 25' in length, connecting well W-101 to the existing header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.1	10	10	0
20	31.1	10	10	0
30	31.1	10	10	0
40	31.1	10	10	0
50	31.1	10	10	0
60	31.1	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:20 AM
CONTRACTOR:	SCS Field Services	DATE:	06/25/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 137' in length, connecting well W-108 to the existing header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.1	10	10	0
20	31.1	10	10	0
30	31.1	10	10	0
40	31.1	10	10	0
50	31.1	10	10	0
60	31.1	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	10:15 AM
CONTRACTOR:	SCS Field Services	DATE:	06/27/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 235' in length, connecting wells W-118 & W-112 to the existing header.

T_i = Initial temperature in °C - 27.78 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.78	10	10	0
20	27.78	10	10	0
30	27.78	10	10	0
40	27.78	10	10	0
50	28.33	10	10.05	0.45
60	28.33	10	10.05	0.45

PASS/FAILURE: $P_c = 0.45 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	10:00 AM
CONTRACTOR:	SCS Field Services	DATE:	06/30/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 106' in length, connecting well W-115 to the existing header.

T_i = Initial temperature in °C - 33.33 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	33.33	10	10	0
20	33.33	10	10	0
30	33.33	10	10	0
40	33.33	10	10	0
50	33.33	10	10	0
60	33.33	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	10:00 AM
CONTRACTOR:	SCS Field Services	DATE:	06/30/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 175' in length, connecting well W-117 to existing well EW-19, which goes on to connect to the existing header.

T_i = Initial temperature in °C - 33.33 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	33.33	10	10	0
20	33.33	10	10	0
30	33.33	10	10	0
40	33.33	10	10	0
50	33.33	10	10	0
60	33.33	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:30 AM
CONTRACTOR:	SCS Field Services	DATE:	06/30/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 72' in length, connecting well W-114 to the existing header.

T_i = Initial temperature in °C - 33.89 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	33.89	10	10	0
20	33.89	10	10	0
30	33.89	10	10	0
40	33.89	10	10	0
50	33.89	10	10	0
60	33.89	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:30 AM
CONTRACTOR:	SCS Field Services	DATE:	07/01/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 170' in length, connecting well W-116 to existing well EW-18, which connects to the existing header.

T_i = Initial temperature in °C - 28.33 °C
P_i = Initial test pressure in psig - 10.2 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.33	10.2	10.2	0
20	28.33	10.2	10.2	0
30	28.33	10.2	10.2	0
40	28.33	10.2	10.2	0
50	28.89	10.2	10.25	0.45
60	28.89	10.2	10.25	0.45

PASS/FAILURE: $P_c = 0.45 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:00 AM
CONTRACTOR:	SCS Field Services	DATE:	07/01/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 312' in length, connecting wells W-122 & W-109 to the existing header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10.1 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.11	10.1	10.1	0
20	31.11	10.1	10.1	0
30	31.11	10.1	10.1	0
40	31.67	10.1	10.15	0.45
50	31.67	10.1	10.15	0.45
60	31.67	10.1	10.15	0.45

PASS/FAILURE: $P_c = 0.45 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	04:00 PM
CONTRACTOR:	SCS Field Services	DATE:	07/01/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 268' in length, connecting wells W-121 & W-110 to the existing header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10.0 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.11	10	10	0
20	31.11	10	10	0
30	31.11	10	10	0
40	31.11	10	10	0
50	31.11	10	10	0
60	31.11	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS | RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:15 AM
CONTRACTOR:	SCS Field Services	DATE:	07/10/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 188' in length, connecting well W-119 to the 6" lateral and JM Eagle 6" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 500' in length, connecting wells W-102, W-120, & W-111 to the existing header on both side of the hill.

T_i = Initial temperature in °C - 25.56 °C
P_i = Initial test pressure in psig - 10.1 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	25.56	10.1	10.1	0
20	25.56	10.1	10.1	0
30	25.56	10.1	10.1	0
40	25.56	10.1	10.1	0
50	25.56	10.1	10.1	0
60	25.56	10.1	10.1	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:00 AM
CONTRACTOR:	SCS Field Services	DATE:	07/16/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 329' in length, connecting wells W-123 & W-136 to a 4" Tee, that connects to a JM Eagle 6" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714 lateral, approximately 290' in length. The 6" lateral connects well W-124 to the existing header.

T_i = Initial temperature in °C - 30.00 °C
P_i = Initial test pressure in psig - 10.2 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	30.00	10.2	10.2	0
20	31.11	10.2	10.29	0.89
30	31.11	10.2	10.29	0.89
40	31.11	10.2	10.29	0.89
50	31.67	10.3	10.34	0.36
60	31.67	10.3	10.34	0.36

PASS/FAILURE: $P_c = 0.36 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1^oC = 70^oC$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0^oC = 73^oF$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	09:40 AM
CONTRACTOR:	SCS Field Services	DATE:	07/24/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 458' in length, connecting wells W-137 & W-125 to a 4" Tee, that connects to the existing header.

T_i = Initial temperature in °C - 31.67 °C
P_i = Initial test pressure in psig - 10.2 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.67	10.2	10.2	0
20	31.67	10.2	10.2	0
30	31.67	10.2	10.2	0
40	31.67	10.2	10.2	0
50	31.67	10.2	10.2	0
60	31.67	10.2	10.2	0

PASS/FAILURE: $P_c = 0.00 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	07:30 AM
CONTRACTOR:	SCS Field Services	DATE:	08/14/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 6" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 880' in length, connecting wells W-126, W-138, W-140, & W-133 to the existing 10" header on the South side and the new 8" header on the North side.

T_i = Initial temperature in °C - 27.78 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.78	10	10	0
20	27.78	10	10	0
30	27.78	10	10	0
40	27.78	10	10	0
50	27.78	10	10	0
60	27.78	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	09:40 AM
CONTRACTOR:	SCS Field Services	DATE:	08/14/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 207' in length, connecting well W-135 to the new 8" header on the North side.

T_i = Initial temperature in °C - 27.78 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.78	10	10	0
20	27.78	10	10	0
30	27.78	10	10	0
40	27.78	10	10	0
50	27.78	10	10	0
60	27.78	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	09:45 AM
CONTRACTOR:	SCS Field Services	DATE:	08/14/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 191' in length, connecting wells W-141 & W-134 to the new 8" header on the North side.

T_i = Initial temperature in °C - 27.78 °C
P_i = Initial test pressure in psig - 10.1 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.78	10.1	10.1	0
20	27.78	10.1	10.1	0
30	27.78	10.1	10.1	0
40	27.78	10.1	10.1	0
50	27.78	10.1	10.1	0
60	27.78	10.1	10.1	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:00 AM
CONTRACTOR:	SCS Field Services	DATE:	08/14/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 71' in length, connecting well W-132 to the new 8" header on the North side.

T_i = Initial temperature in °C - 28.33 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.33	10	10	0
20	28.33	10	10	0
30	28.33	10	10	0
40	28.33	10	10	0
50	28.33	10	10	0
60	28.33	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:00 AM
CONTRACTOR:	SCS Field Services	DATE:	08/14/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 191' in length, connecting wells W-141 & W-134 to the new 8" header on the North side.

T_i = Initial temperature in °C - 28.83 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.83	10	10	0
20	28.83	10	10	0
30	28.83	10	10	0
40	28.83	10	10	0
50	28.83	10	10	0
60	28.83	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	10:20 AM
CONTRACTOR:	SCS Field Services	DATE:	08/16/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 145' in length, connecting well W-127 to the new 8" header on the East side.

T_i = Initial temperature in °C - 28.89 °C
P_i = Initial test pressure in psig - 10.1 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.89	10.1	10.1	0
20	28.89	10.1	10.1	0
30	28.89	10.1	10.1	0
40	28.89	10.1	10.1	0
50	28.89	10.1	10.1	0
60	28.89	10.1	10.1	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	11:30 AM
CONTRACTOR:	SCS Field Services	DATE:	08/16/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 264' in length, connecting wells W-139 & W-129 to the new 8" header on the East side.

T_i = Initial temperature in °C - 28.89 °C
P_i = Initial test pressure in psig - 15 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.89	15	15	0
20	28.89	15	15	0
30	28.89	15	15	0
40	28.89	15	15	0
50	28.89	15	15	0
60	28.89	15	15	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	02:20 PM
CONTRACTOR:	SCS Field Services	DATE:	08/16/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 122' in length, connecting well W-131 to the new 8" header on the North side.

T_i = Initial temperature in °C - 28.89 °C
P_i = Initial test pressure in psig - 11 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.89	11	11	0
20	28.89	11	11	0
30	28.89	11	11	0
40	28.89	11	11	0
50	28.89	11	11	0
60	28.89	11	11	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = \underline{0.98\% < 1\% \text{ ok}}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:30 AM
CONTRACTOR:	SCS Field Services	DATE:	08/18/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 2" IPS SDR11 PC16C PE3608 PE3408 345464C ASTM D3035, approximately 1245' in length, extending the existing air line from the South east corner to the condensate trap CT-5.

T_i = Initial temperature in °C - 27.22 °C
P_i = Initial test pressure in psig - 75 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.22	75	75	0
20	27.22	75	75	0
30	27.22	75	75	0
40	27.22	75	75	0
50	27.22	75	75	0
60	27.22	75	75	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS | RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:35 AM
CONTRACTOR:	SCS Field Services	DATE:	08/18/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 8" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 1177' in length, connecting the existing header on the South East corner to the condensate trap CT-5.

T_i = Initial temperature in °C - 27.22 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.22	10	10	0
20	27.22	10	10	0
30	27.22	10	10	0
40	27.22	10	10	0
50	27.22	10	10	0
60	27.22	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$P_c = 24.85 - 14.7 = 10.15$ psig

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	08:40 AM
CONTRACTOR:	SCS Field Services	DATE:	08/18/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 8" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 817' in length, connecting the header from the condensate trap CT-5 to the tie-in on the North side.

T_i = Initial temperature in °C - 27.22 °C
P_i = Initial test pressure in psig - 10 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	27.22	10	10	0
20	27.22	10	10	0
30	27.22	10	10	0
40	27.22	10	10	0
50	27.22	10	10	0
60	27.22	10	10	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	01:10 PM
CONTRACTOR:	SCS Field Services	DATE:	08/18/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 4" IPS SDR17 PC100 PE3608 PE3408 345464C ASTM F714, approximately 150' in length, connecting well W-128 to the new 8" header on the East side.

T_i = Initial temperature in °C - 28.89 °C
P_i = Initial test pressure in psig - 10.5 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	28.89	10.5	10.5	0
20	28.89	10.5	10.5	0
30	28.89	10.5	10.5	0
40	28.89	10.5	10.5	0
50	28.89	10.5	10.5	0
60	28.89	10.5	10.5	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

ATTACHMENT 1 TO SECTION 01669C
HDPE PIPE PRESSURE TEST REPORT FORM

PROJECT NAME/NO:	Orange County, Class III, Cell I Expansion	TIME:	10:00 AM
CONTRACTOR:	SCS Field Services	DATE:	08/23/2008
PERSON PERFORMING TESTS:	Dennis Adams (SCS)		

DESCRIPTION/LOCATION OF TEST SEGMENT (Pipe Diameter, Length, and SDRs):
JM Eagle 2" IPS SDR11 PC16C PE3608 PE3408 345464C ASTM D3035, approximately 504' in length airline extending from the condensate trap CT-5 to 20' beyond the high point on the East header.

T_i = Initial temperature in °C - 31.11 °C
P_i = Initial test pressure in psig - 10.3 psig
P_c = Initial pressure in psig corrected for temperature (T_t) at time 't'
t = Time in minutes from initiation of test
T_t = Temperature in °C at time 't'
P_t = Test pressure in psig at time 't'

$$P_c = \frac{(P_i + 14.7)(T_t + 273)}{(T_i + 273)} - 14.7$$

$$\text{Percent Pressure Drop} = \frac{P_c - P_t}{P_c} \times 100$$

TIME (min.)	T_i, T_t TEMP READING (°C)	P_i, P_t GAUGE READING (psig)	P_i, P_t CORRECTED PRESSURE (psig)	P_c PRESSURE DROP (%)
0	31.11	10.3	10.3	0
20	31.11	10.3	10.3	0
30	31.11	10.3	10.3	0
40	31.11	10.3	10.3	0
50	31.11	10.3	10.3	0
60	31.11	10.3	10.3	0

PASS/FAILURE: $P_c = 0 < 1$ % - PASS RETEST (yes/no): NO

DESCRIPTION/NATURE OF LEAKS AND REPAIRS OF RETEST SEGMENT: No leaks detected.

EXAMPLE CALCULATION SHEET

GIVEN:

$P_i = 10$ psig
$T_i = 21.1°C = 70°C$

and at times t = 60 minutes

$P_t = 10.05$ psig
$T_t = 23.0°C = 73°F$

Calculated Corrected Initial Pressure

$$P_c = \frac{(10.0 + 14.7)(23.0 + 273)}{(21.1 + 273)} - 14.7$$

$$P_c = 24.85 - 14.7 = 10.15 \text{ psig}$$

Calculate Percent Pressure Loss

$$\% \text{ Pressure Loss} = \frac{10.15 - 10.05}{10.15} \times 100 = 0.98\% < 1\% \text{ ok}$$

NOTE: The difference between the corrected pressure reading (P_c) and the gauge reading (P_t) cannot differ by more than 1% of the corrected pressure reading (P_c)(i.e., .105 @ 10.5 psig) over a time interval of 60 minutes.

- END OF SECTION -

APPENDIX C

LANDFILL GAS EXTRACTION WELL DRILLING LOGS

GAS EXTRACTION WELL LOG

DATE: 6/7/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

EW-101 WELL NUMBER OR NAME

23' LINEAR FEET OF DRILLING

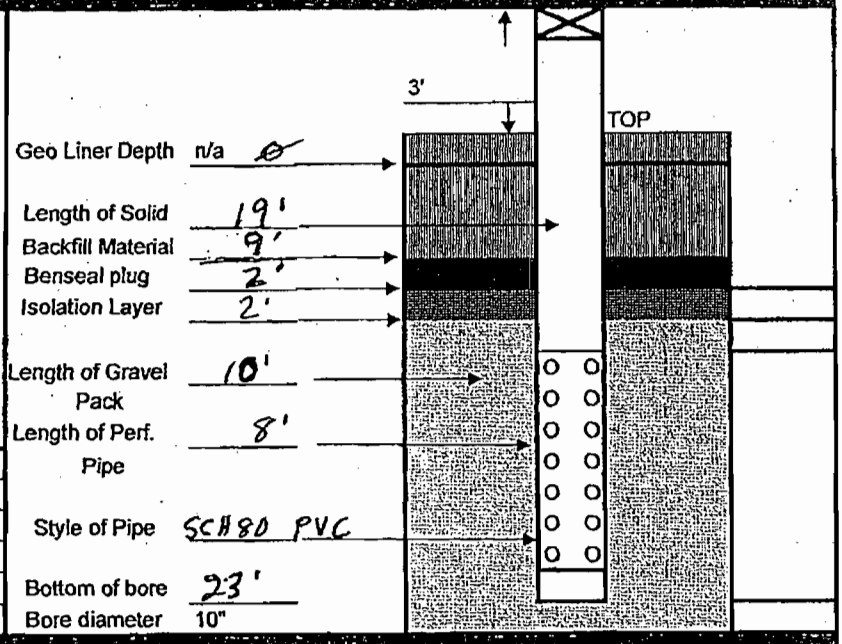
23' LINEAR FEET OF COMPLETION

0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:



Time	OXYGEN	H2S	LEL / CO
7:00	20.9	2.	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00	↓	↓	↓
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

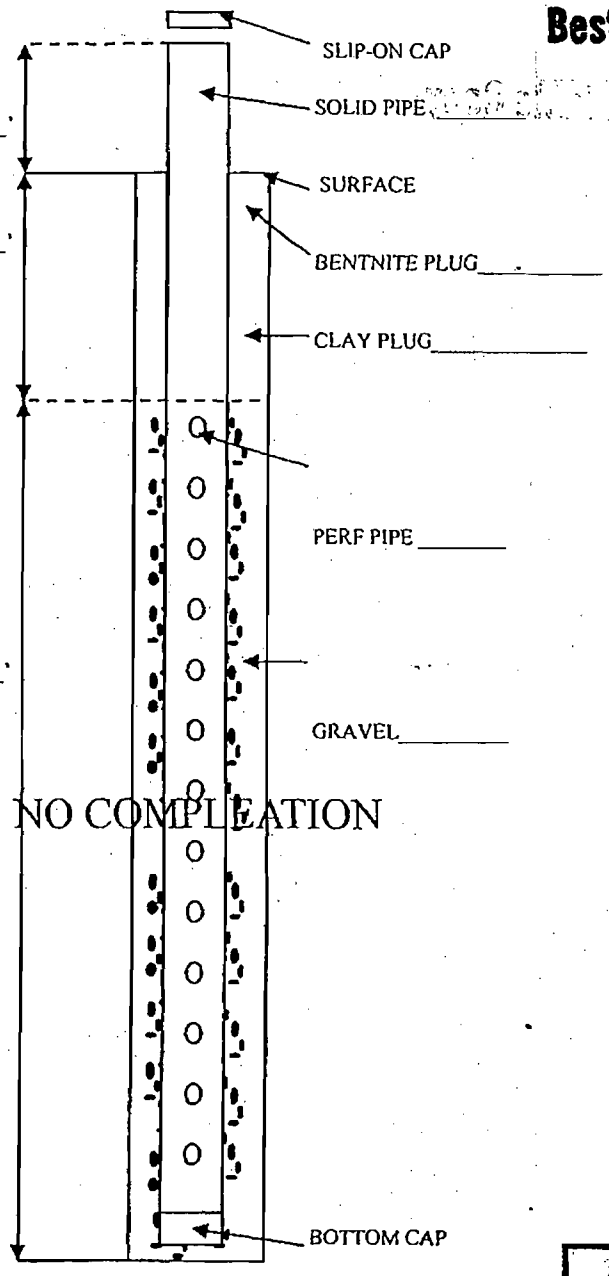
QUALITY DRILLING SERVICE

Well Number: GW-101

DRILLING & COMPLETION LOG

Date: 6/7/08 SAT.

Best Available Copy



NO COMPLEATION

DRILL	23 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	CAOR/SAND	NONE	DRY
2-5	WOOD/STEEL	SLIGHT	100°
5-10	CONCRETE/REBAR	↓	101°
10-15	SAND - 5 ft.	↓	95°
15-23	SAND/WOOD	↓	99°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-101
23 ft.

Satwadhar 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Andrew D. Cruz 6/7/08
QUALITY DRILLING SERVICE DATE

BEST AVAILABLE COPY

GAS EXTRACTION WELL LOG

DATE: 6/7/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-102 WELL NUMBER OR NAME

23' LINEAR FEET OF DRILLING

23' LINEAR FEET OF COMPLETION

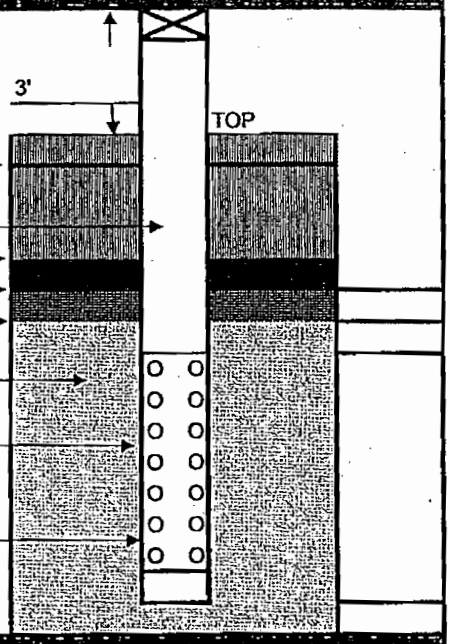
-0- LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Geo Liner Depth	n/a -0-
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	10'
Length of Perf. Pipe	8'
Style of Pipe	SCH-80 PVC
Bottom of bore	23'
Bore diameter	10"



Time	OXYGEN	H2S	LEL / CO
7:00	20.9	2.	-0-
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			↓
3:00		↓	
4:00	↓		
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

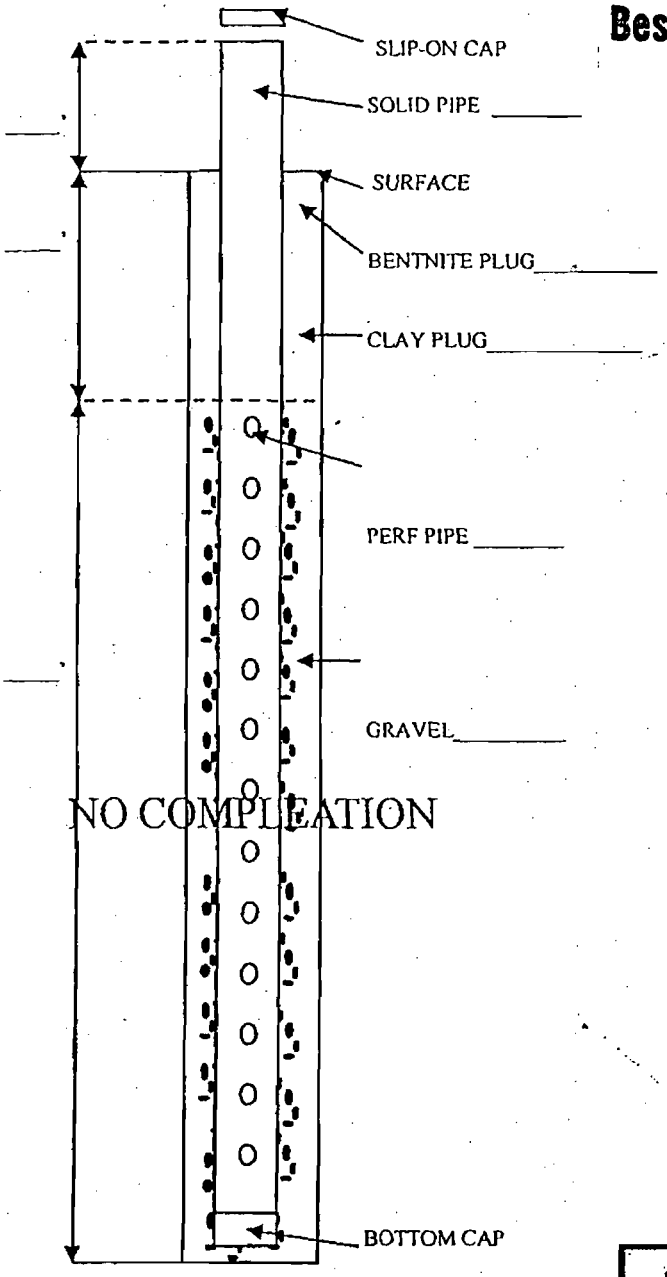
QUALITY DRILLING SERVICE

Well Number: GW-102

Date: SAT. 6/7/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	23 ft.	WEATHER	CLEAR/Hot
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/TRASH	NONE	DRY
2-5	PLASTIC/WOOD	SLIGHT	91°
5-10	WIRE/FENCING	↓	98°
10-15	SHINGLES	↓	101°
15-23	CONCRETE/REBAR	↓	↓ 99°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-102
23 ft.

Patwardhan 07/24/08
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Anthony M. Engle 6/7/08
QUALITY DRILLING SERVICE DATE
PRINT DRILLER - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/7/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-103 WELL NUMBER OR NAME

26' LINEAR FEET OF DRILLING

26' LINEAR FEET OF COMPLETION

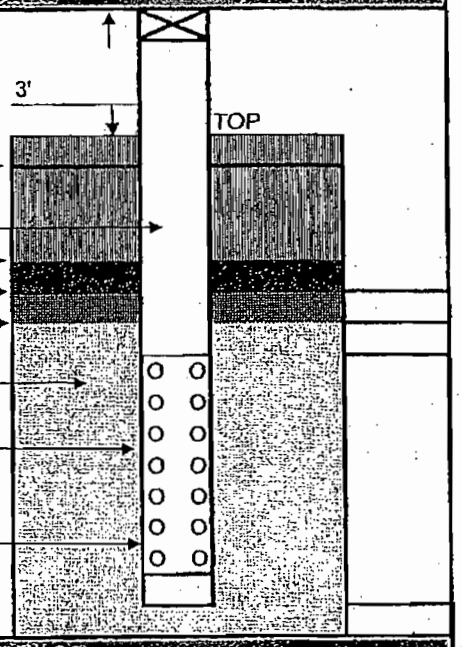
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	13'
Length of Perf. Pipe	11'
Style of Pipe	SCH80 PVC
Bottom of bore	26'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	2.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

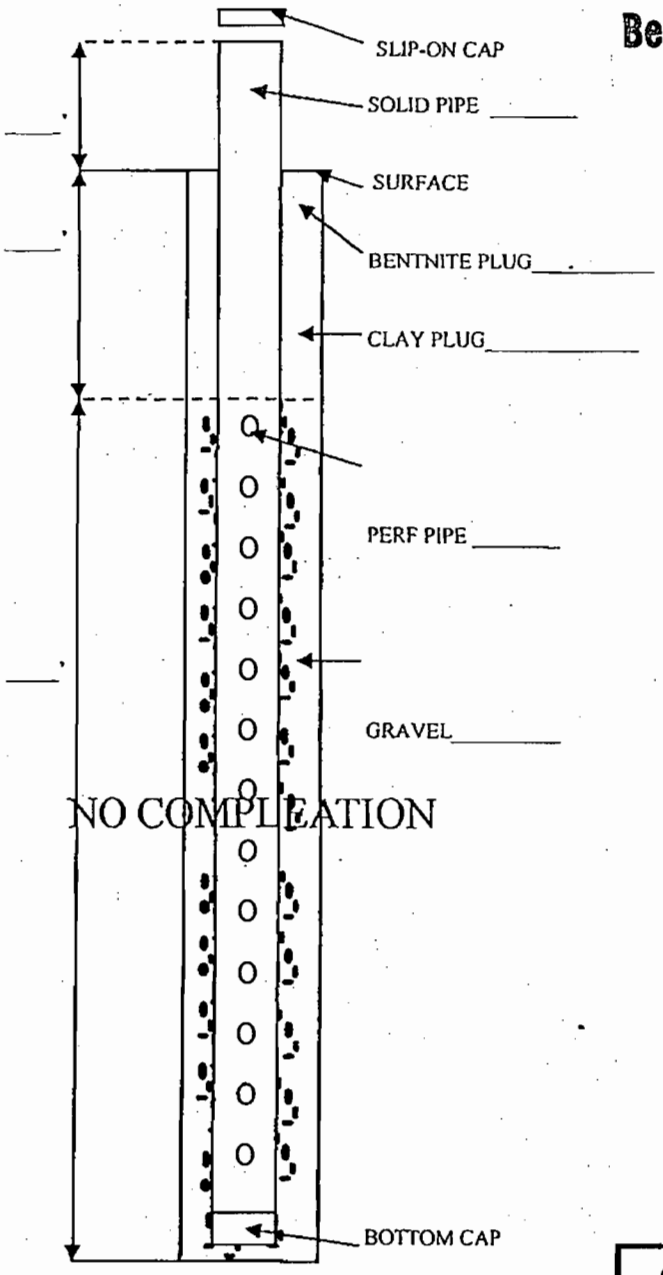
Project Name: Orange County

Well Number: GW-103

Date: SAT. 6/7/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	26ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-5	PLYWOOD/SAND	SLIGHT	84°
5-10	I-BEAM/WOOD		85°
10-15	SAND/REBAR		90°
15-20	CONCRETE/REBAR		91°
20-26	SAND/PAPER		96°
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-103
26ft.

Gautwardhan 07/24/08
CLIENT REPRESENTATIVE NAME & TITLE — DATE

Anthony D. Cruz 6/7/08
QUALITY DRILLING SERVICE — DATE
BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/7/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-104 WELL NUMBER OR NAME

26' LINEAR FEET OF DRILLING

26' LINEAR FEET OF COMPLETION

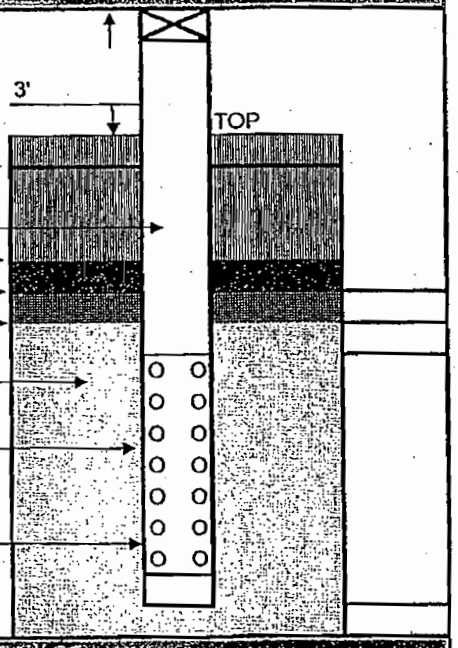
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a	0
Length of Solid		19'
Backfill Material		9'
Benseal plug		2'
Isolation Layer		2'
Length of Gravel Pack		13'
Length of Perf. Pipe		11'
Style of Pipe		sch 80 PVC
Bottom of bore		26'
Bore diameter		10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	2.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

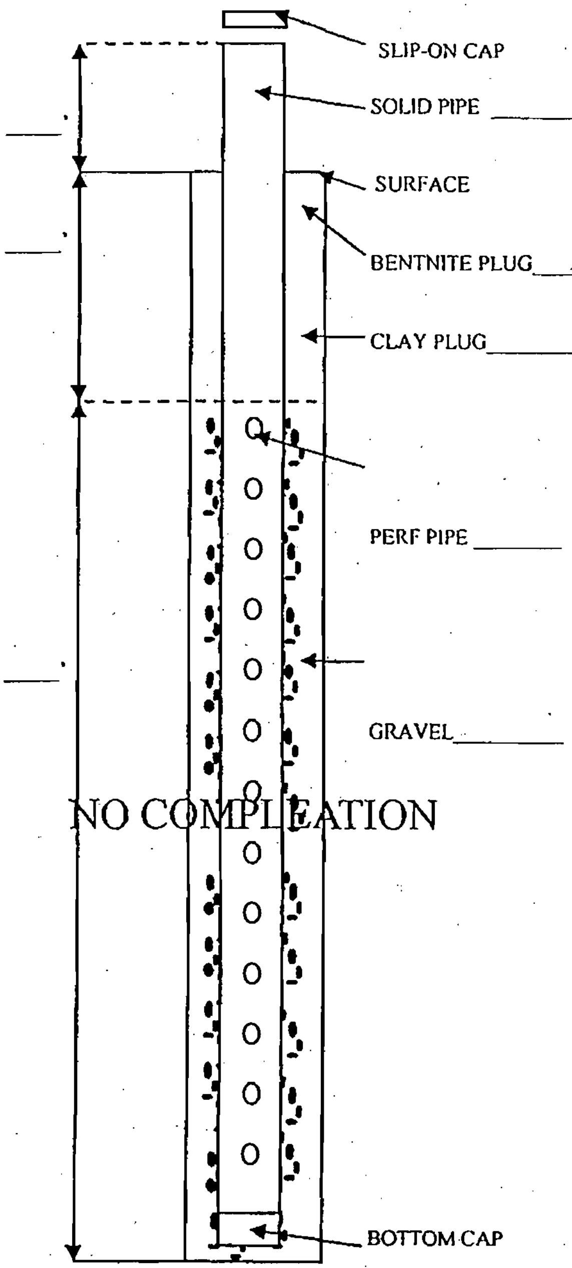
SCS SITE SUPERINTENDENT DATE

Well Number: GW-104

Date: SAT. 6/7/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	26FT.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-5	BLUE TARP	SLIGHT	104°
5-10	SAND/CONCRETE	↓	101°
10-15	CONCRETE/REBAR	↓	99°
15-20	SAND/WOOD/TIRES	↓	104°
20-26	STEEL/PLASTIC	↓	↓ 107°
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-104
26FT.

Patwardhan — 07/24/08

CLIENT REPRESENTATIVE — DATE

NAME & TITLE

[signature] — 6/7/08

QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 6/7/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-105 WELL NUMBER OR NAME

27' LINEAR FEET OF DRILLING

27' LINEAR FEET OF COMPLETION

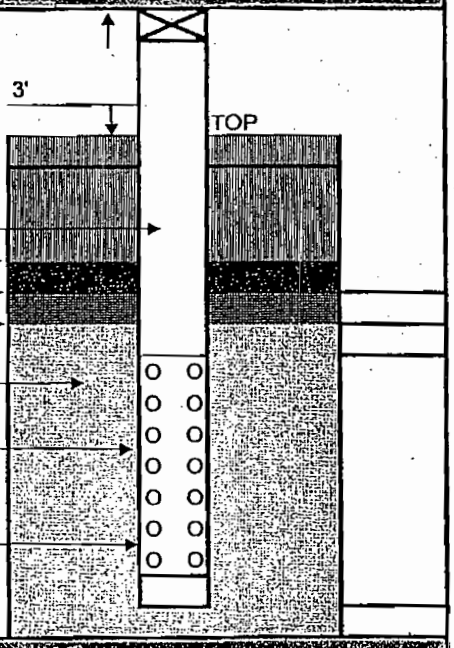
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well As-built



Geo Liner Depth	n/a	0
Length of Solid		19'
Backfill Material		9'
Benseal plug		2'
Isolation Layer		2'
Length of Gravel Pack		14'
Length of Perf. Pipe		12'
Style of Pipe		SCH80 PVC
Bottom of bore		27'
Bore diameter		10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	2.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08.
CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.
NAME & TITLE

Dennis Adams
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

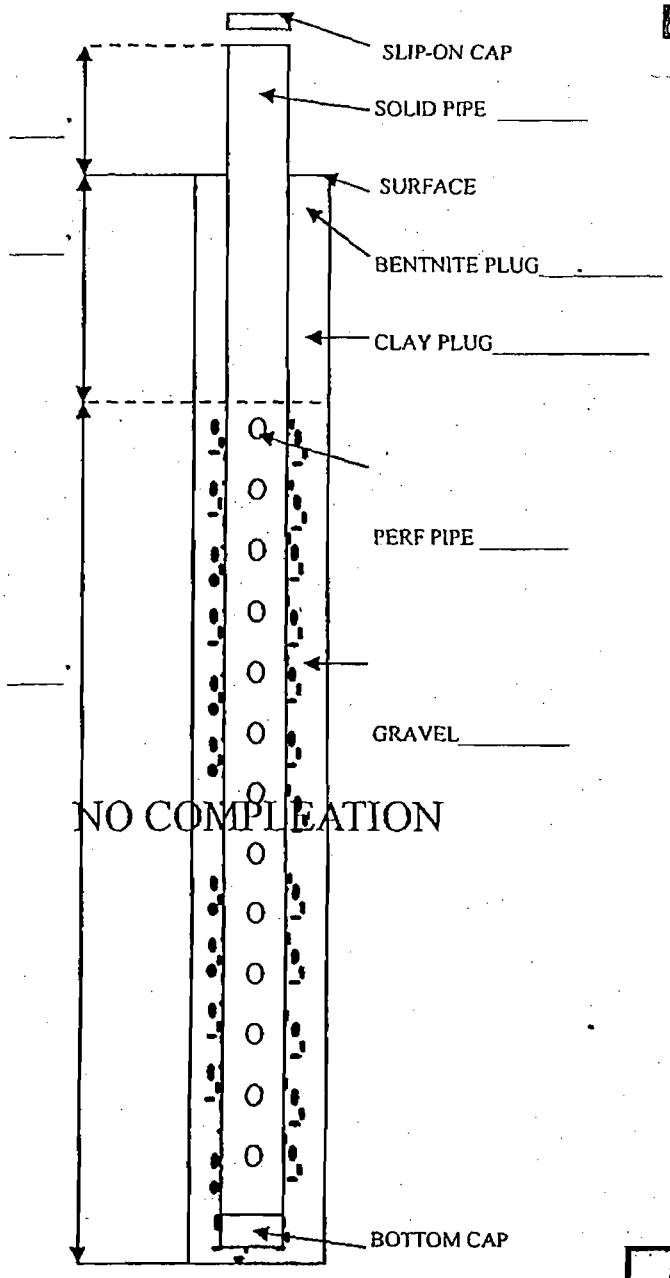
Project Name: Orange County

Well Number: GW-105

Date: SAT. 6/7/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	27 FT.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-5	SAND/TIRES	SLIGHT	84°
5-10	SAND/CONCRETE	↓	86°
10-15	STEEL CABLE	↓	90°
15-20	SAND-STEEL	MODERATE	97°
20-25	SAND/WOOD	↓	↓ 100°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

ARRIVE AT SITE AND BEGIN DRILLING AT GW-105 TO 27FT. THEN DO GW-104 TO 26FT. - GW-103 TO 26FT. - GW-102 TO A DEPTH OF 23FT. AND LASTLY, GW-101 TO 23FT. FINISH UP FOR TODAY AND WILL START DRILLING AGAIN ON MONDAY. THERE IS A SHORTAGE OF STONE ON SITE & MAY HAVE TO WAIT FOR ORANGE COUNTY TO APPROVE SUBMITTAL ON STONE DELIVERY.

Jaiswardhan 07/24/08.

CLIENT REPRESENTATIVE — DATE

NAME & TITLE

6/7/08

QUALITY DRILLING SERVICE — DATE

BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/9/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-106 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

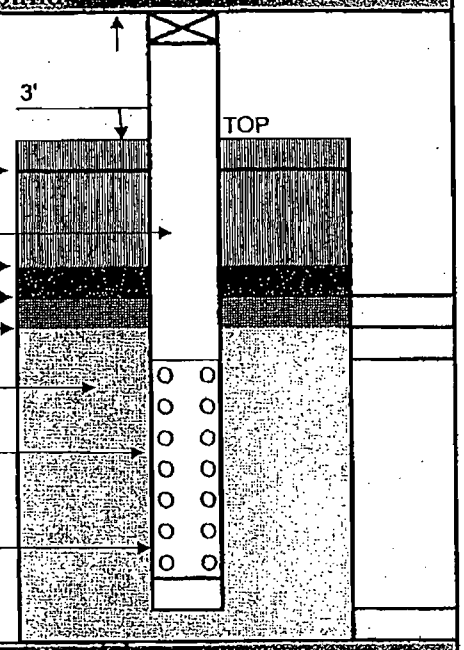
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH80 PVC
Bottom of bore	28'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	1.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

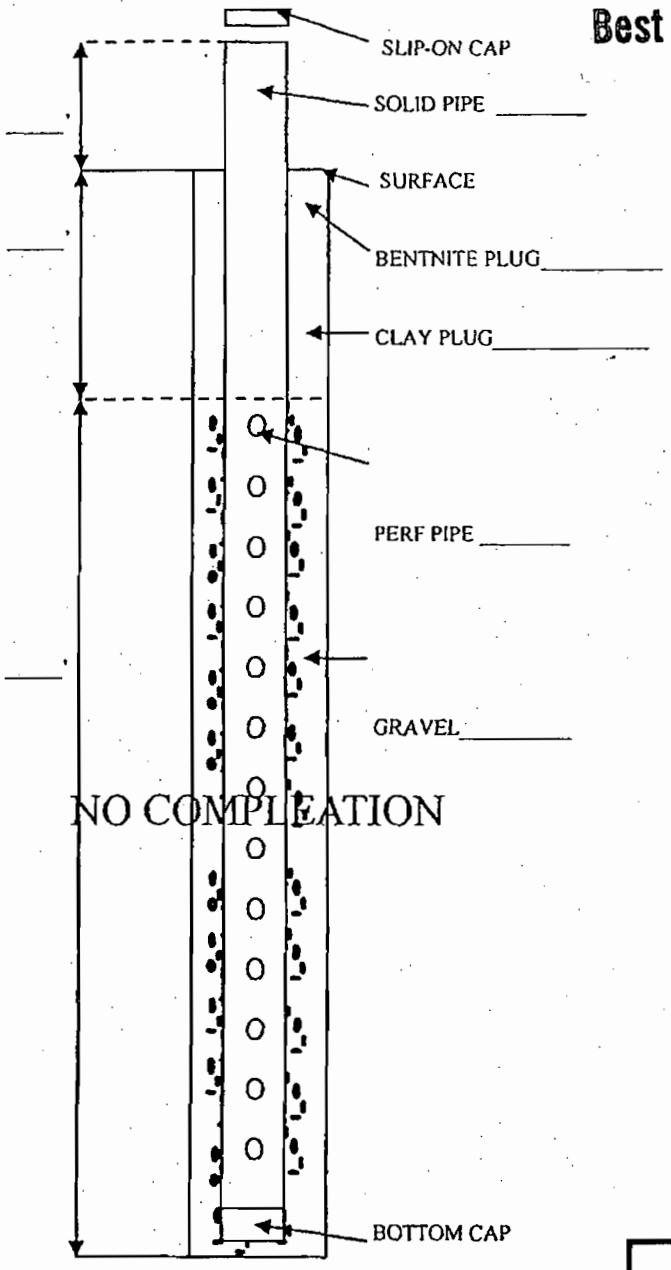
SCS SITE SUPERINTENDENT DATE

Well Number: GW-106

Date: MON. 6/9/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	28 ft.	WEATHER	LIGHTNING
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-5	CARPET/WOOD	SLIGHT	87°
5-10	WOOD/BRICKS		94°
10-15	CONCRETE/DEBRIS		89°
15-20	WOOD/FABRIC		99°
20-28	CARPET/SAND		
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-106

28 ft.

Jonathan Wardhan 06/24/08.

CLIENT REPRESENTATIVE DATE

NAME & TITLE

Arthur D. Engl 6/9/08

QUALITY DRILLING SERVICE DATE

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-107 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

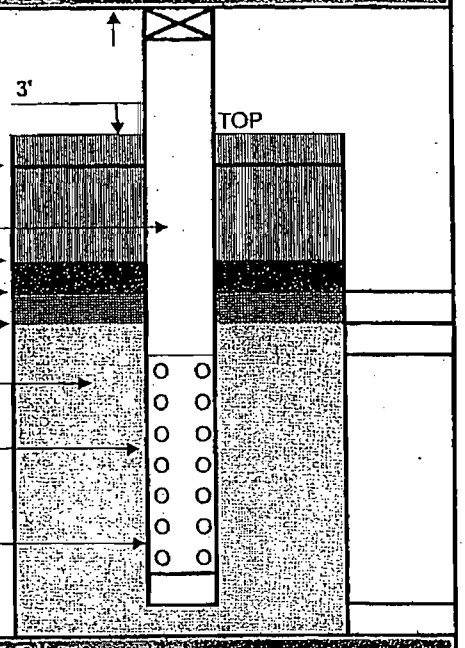
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Ashbuild



Geo Liner Depth	n/a 0
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH 80 PVC
Bottom of bore	28'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	1.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08
CLIENT REPRESENTATIVE DATE

Gautam Patwardhan Engineer
NAME & TITLE

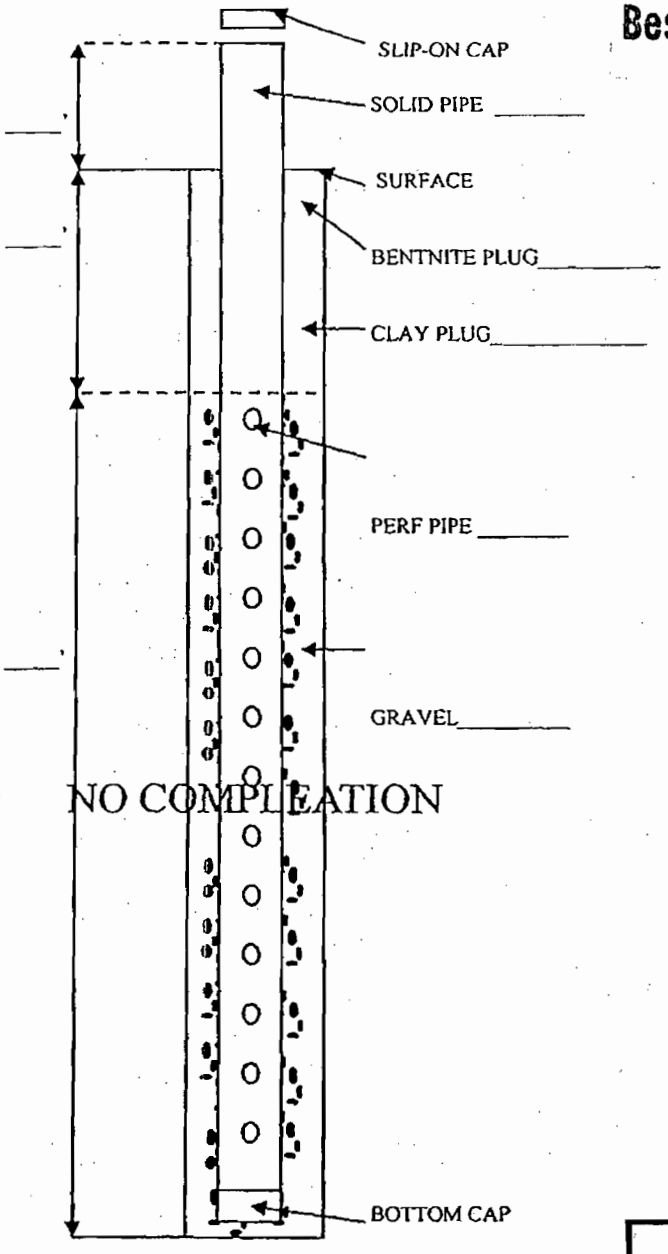
Dennis Adams
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-107
Date: TUE. 6/10/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	28ft	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-5	PLAST/C/SAND	SLIGHT	
5-10	REBAR/CONC. BLOCKS		9
10-15	I-BEAM/ROOF TILES		1
15-20	SAND 15-22'		97
20-28	SAND/WOOD	↓	↓ 97
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

BEGIN DAY DRILLING AT LOCATION GW-107, THEN GW-108, GW-109, GW-110, GW-111, AND GW-112. ALL ARE 28 FT. LASTLY, DRILL GW-113 IS DRILLED TO A TOTAL OF 39 FT. STONE THAT IS ON SITE IS NOT YET APPROVED SO WE ARE SHUT DOWN FOR THE DAY. RESUME IN THE MORNING

Gatewardhan 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

QUALITY DRILLING SERVICE DATE

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-108 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

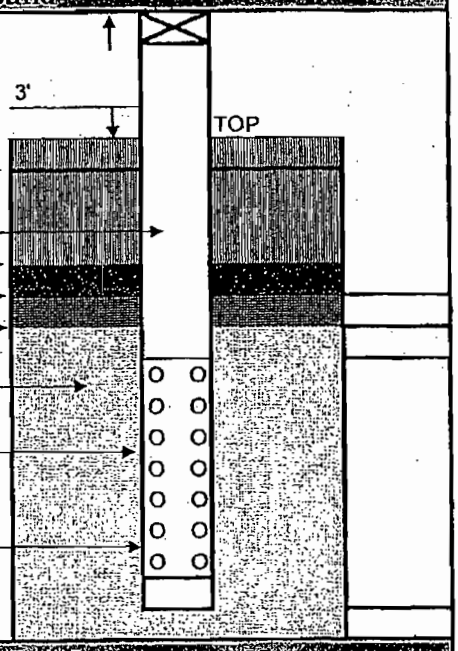
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH 80 PVC
Bottom of bore	28'
Bore diameter	10"

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Well Boring Log

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

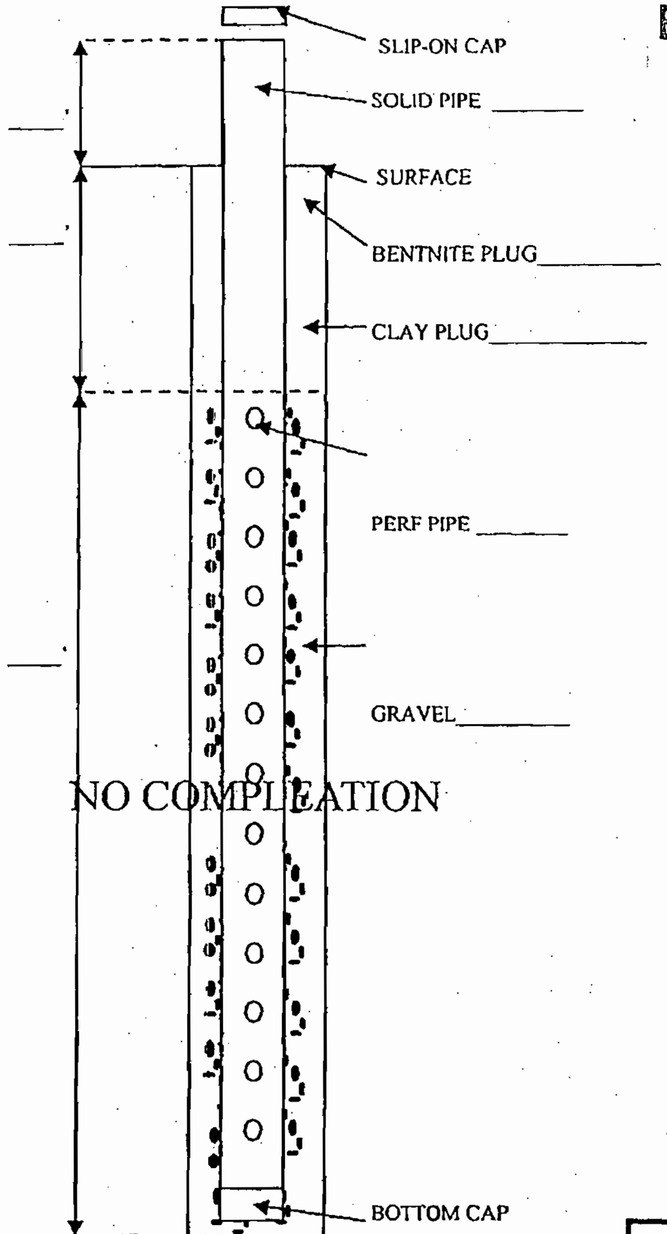
DRILLING & COMPLETION LOG

Project Name: Orange County

Well Number: GW-108

Date: TUE. 6/10/08

Best Available Copy



DRILL	28 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	MULCH/COVER	NONE	DRY
2-5	SAND/CARPET	SLIGHT	↓
5-10	PLASTIC/WOOD	↓	99
10-15	CONCRETE	↓	99
15-20	I-BEAM	↓	99
20-28	GAURDRAILS	↓	10[illegible]
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-108
28 ft.

[signature] 07/24/08.
CLIENT REPRESENTATIVE — DATE
NAME & TITLE

[signature] 6/10/0[illegible]
QUALITY DRILLING SERVICE — DATE
BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-109 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

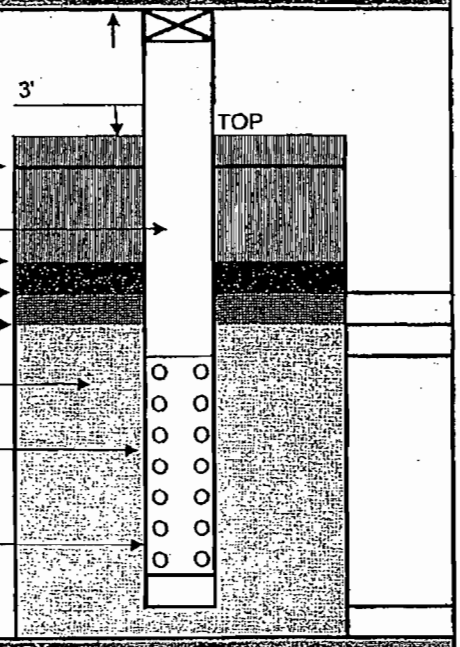
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH 80 PVC
Bottom of bore	28'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

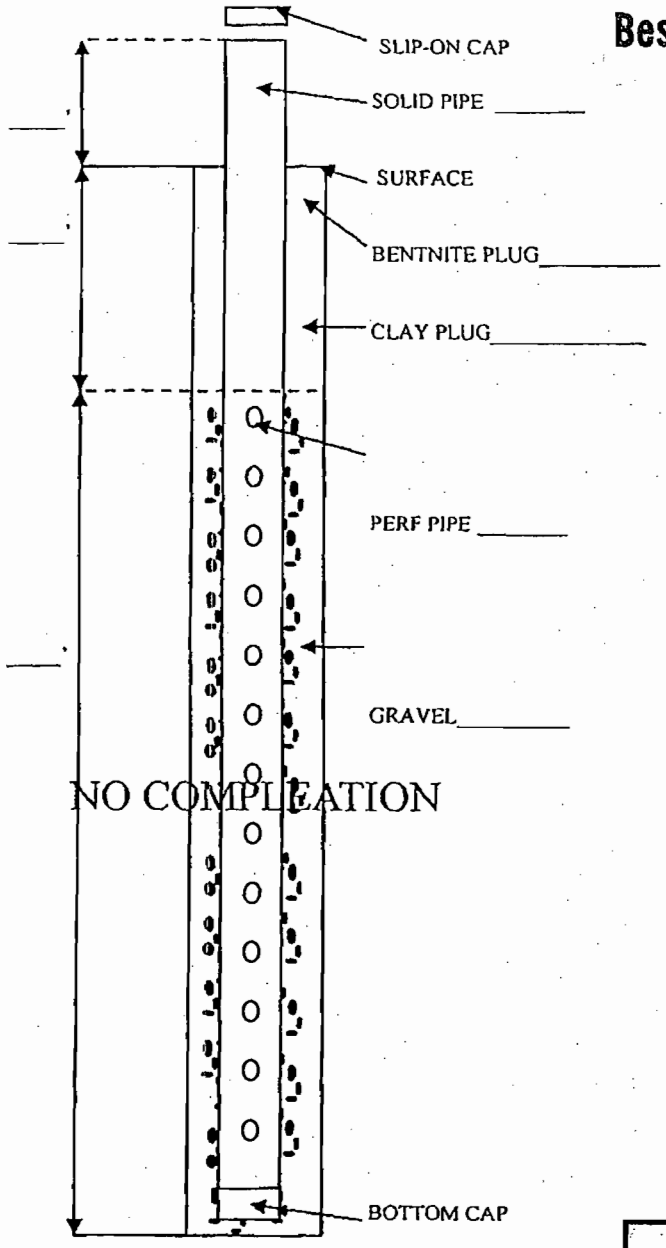
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-109
Date: TUE. 6/10/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	28 FT.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-5	STEEL/CABLE	SLIGHT	8
5-10	WIRE/WOOD		9%
10-15	SAND/WOOD		10
15-20	REBAR/SAND		10.3
20-28	FABRIC/PAPER		10
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-109
28 FT.

Gustavo Chan 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Nathan M. 6/10
QUALITY DRILLING SERVICE DATE
BILL BAILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-110 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

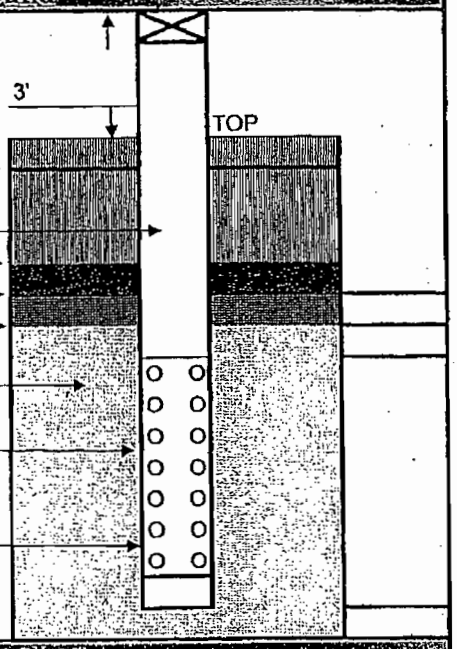
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH 80 PVC
Bottom of bore	28'
Bore diameter	10"

Time	OXYGEN	H2S	LEL / CO
7:00	20.8'	2.	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Well Boring Log

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

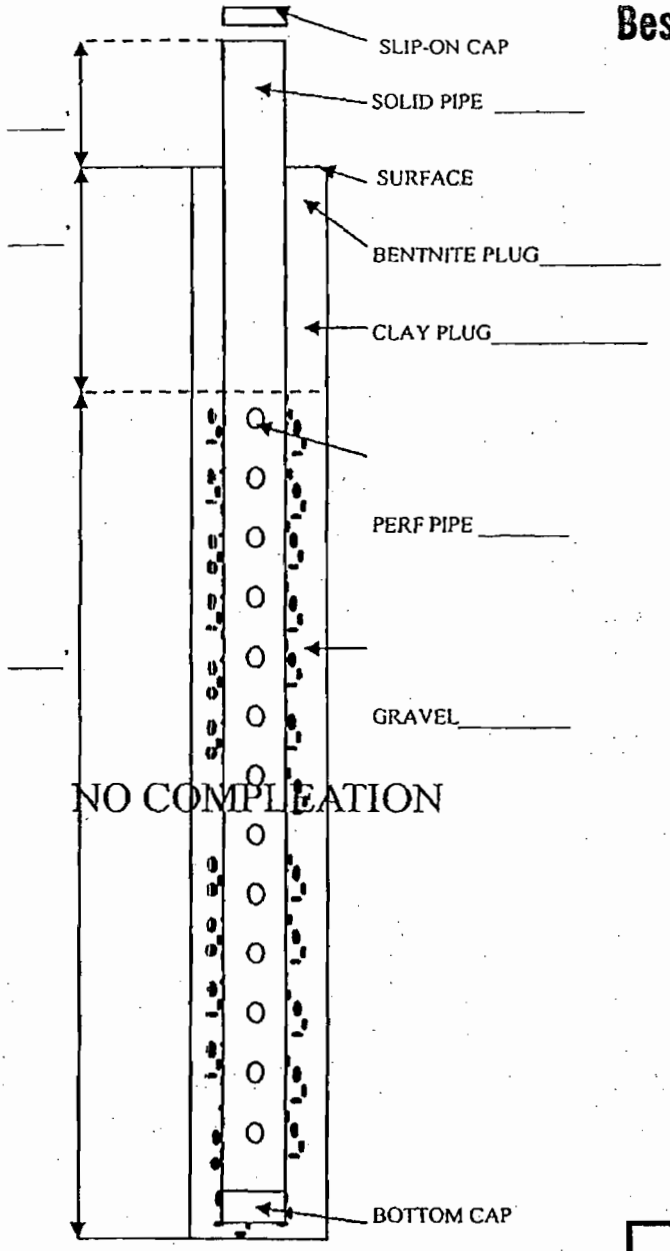
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-110
Date: TUE. 6/10/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	28 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/MULCH	NONE	DRY
2-5	SAND/PAPER	SLIGHT	87
5-10	SAND		89
10-15	SAND		91
15-20	SAND/REBAR		93
26-28	WOOD/SHINGLES		94
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-110
28 ft.

Patwardhan 07/24/08
CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE 6/10/08
BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-111 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

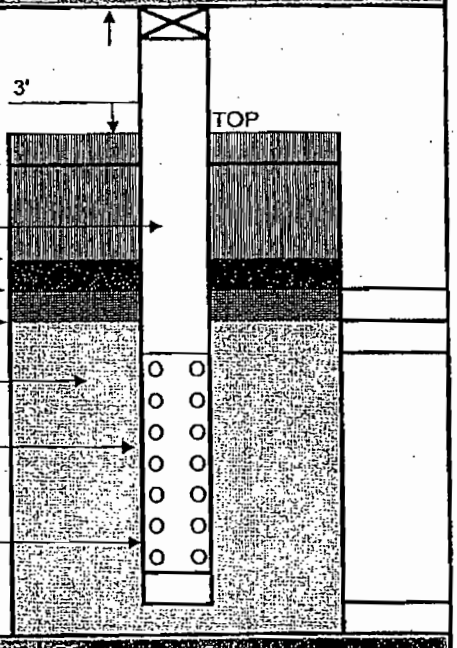
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well As-build



Geo Liner Depth	n/a
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH 80 PVC
Bottom of bore	28'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00	↓	↓	↓
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT ~~REPRESENTATIVE~~ DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

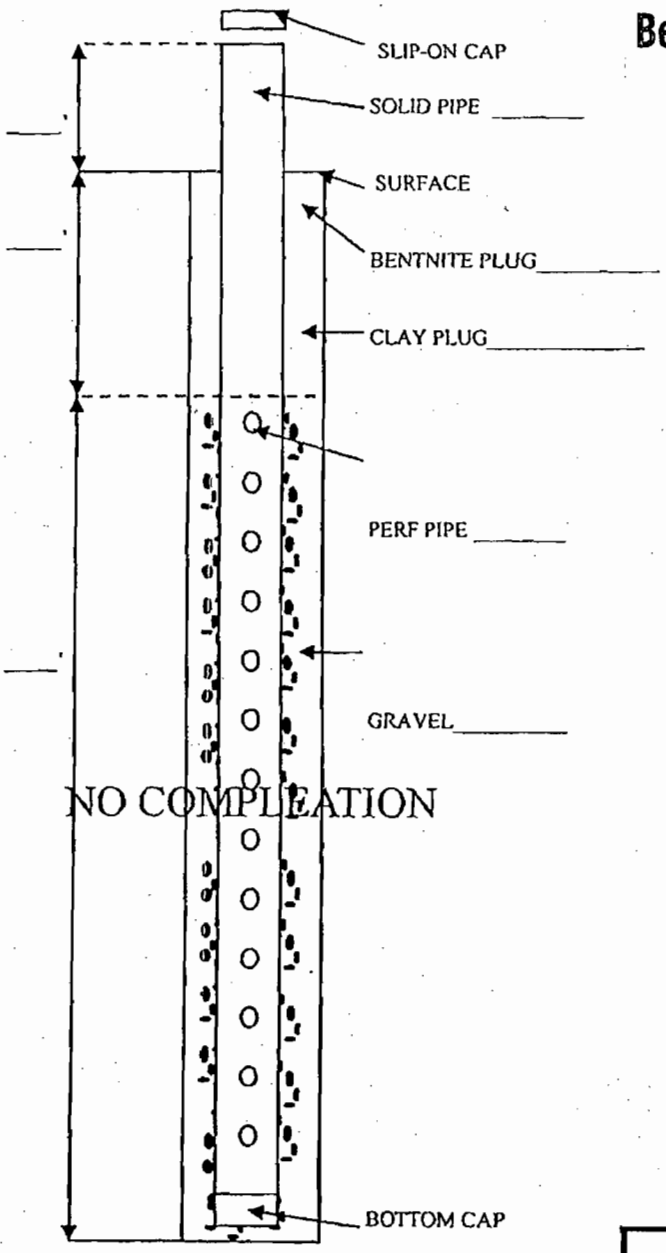
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-111
Date: TUE. 6/10/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	28 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER	NONE	DRY
2-5	CARPET	SLIGHT	10
5-10	WIRE FENCE		97
10-15	CABLE		9
15-20	I-BEAM		93
20-28	WOOD/CONCRETE	↓	↓ 9
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-111
28 ft.

Jadwardhan 07/24/08
CLIENT REPRESENTATIVE DATE
NAME & TITLE

QUALITY DRILLING SERVICE DATE
BILL BAILEY - SITE SUPERVISOR

BEST AVAILABLE COPY

GAS EXTRACTION WELL LOG

DATE: 6/9/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

VE-114 WELL NUMBER OR NAME

49' LINEAR FEET OF DRILLING

49' LINEAR FEET OF COMPLETION

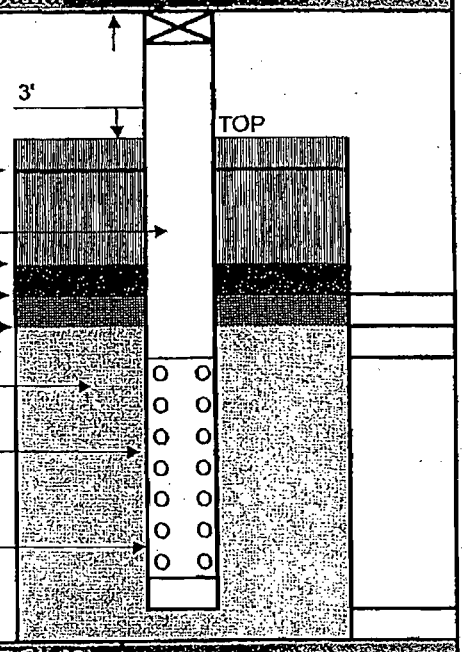
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	31'
Length of Perf. Pipe	29'
Style of Pipe	sch 80 pvc
Bottom of bore	49'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	2.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

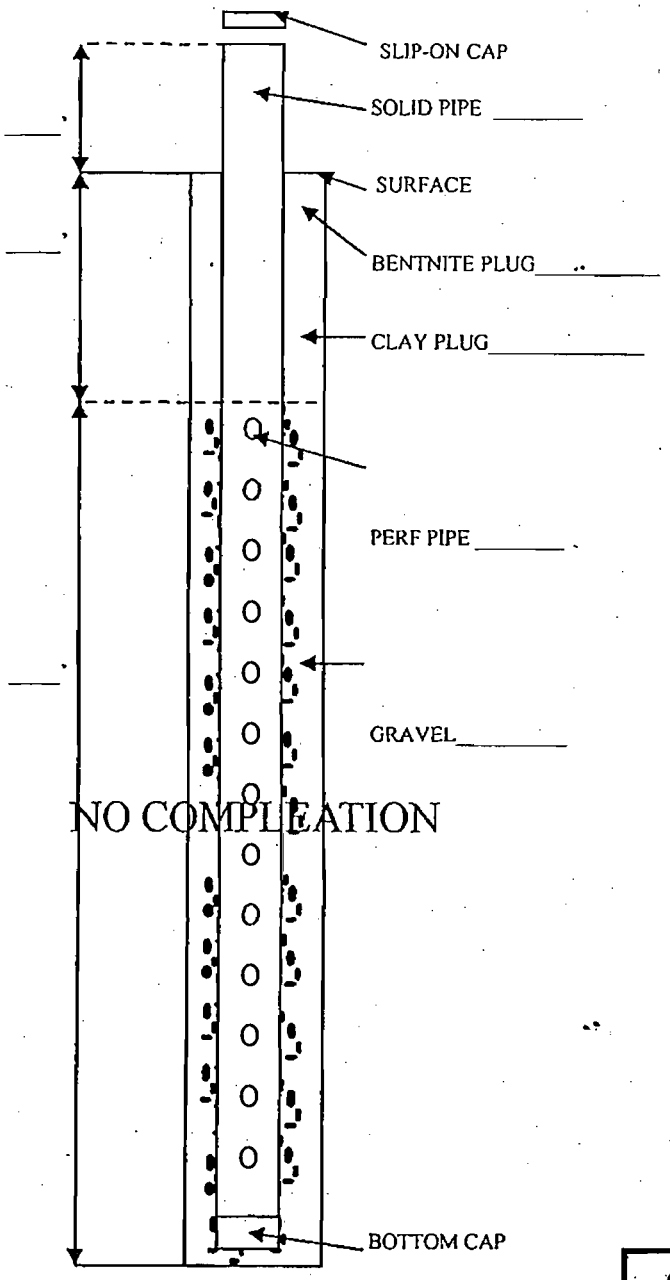
Project Name: Orange County

Well Number: GW-114

Date: MON. 6/9/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	4/9 ft.	WEATHER	CLEAR - LIGHTNING
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	STEEL/SAND	SLIGHT	84°
21-30	CONCRETE/REBAR	↓	87°
31-40	SAND/BRICKS	↓	94°
41-50	CARPET/WOOD	↓	↓ 99°
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

MON. AM. HAVE TAILGATE SAFETY MEETING. BEGIN DRILLING AT GW-114 TO DEPTH OF 49 FT. MOVE TO GW-115. DRILL TO A DEPTH OF 54 FT. SET PIPE. MOVE TO GW-106 AND DRILL TO 28 FT. SET UP MACHINE AT GW-107 BUT END UP STOPPING FOR THE DAY DUE TO BAD WEATHER - LIGHTNING. DEPART SITE

Gaturwdhan 07/24/08

CLIENT REPRESENTATIVE DATE

NAME & TITLE

Arthur R. Engle 6/9/08

QUALITY DRILLING SERVICE DATE

BILL BAILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-113 WELL NUMBER OR NAME

39' LINEAR FEET OF DRILLING

39' LINEAR FEET OF COMPLETION

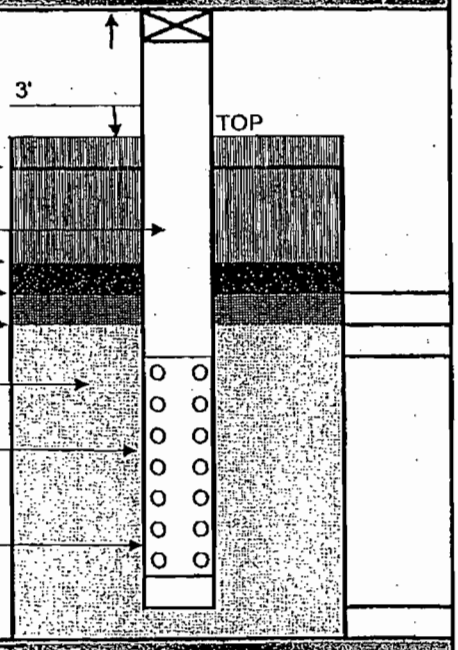
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	21'
Length of Perf. Pipe	19'
Style of Pipe	SCH 80 PVC
Bottom of bore	39'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00	↓	↓	↓
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

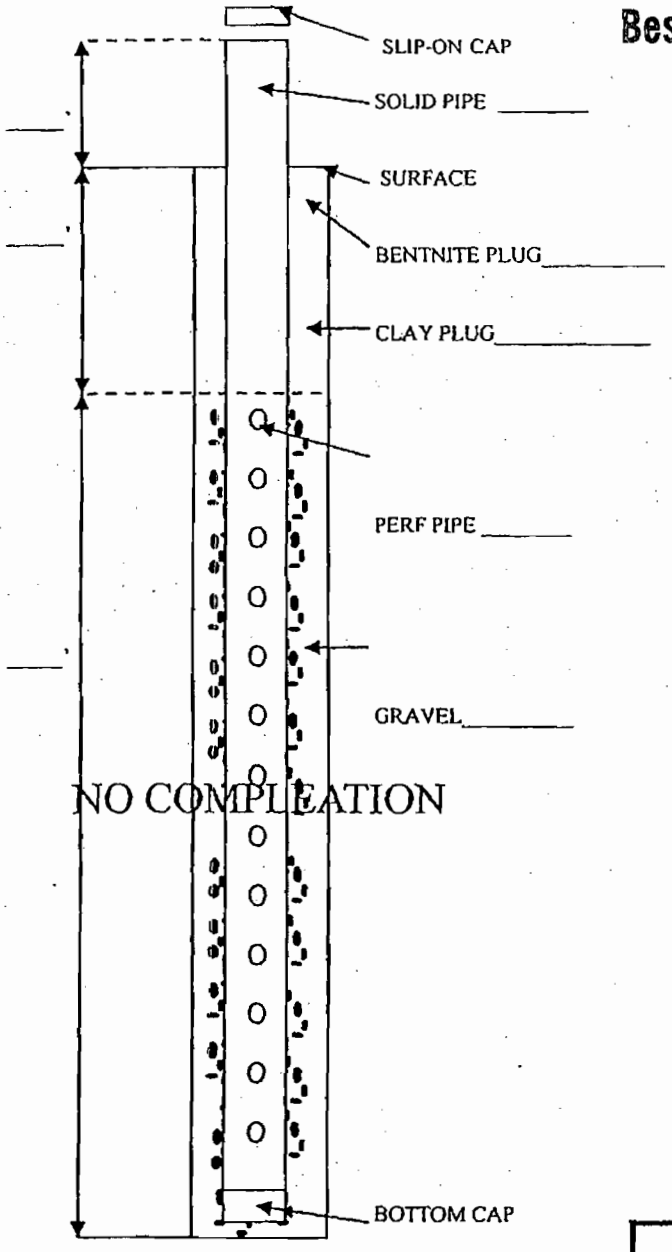
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-113
Date: TUE. 6/10/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	39 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-5	STEEL PLATE	SLIGHT	8
5-10	SAND/STEEL		8
10-15	CARPET/SAND		8
15-20	SAND		9
20-25	SAND/REBAR		9
25-30	GROCERY CARTS		9
30-39	SAND/TIRES		10
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-113
39 ft.

Gatwardhan 07/24/08.
CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE 6/10/08

GAS EXTRACTION WELL LOG

DATE: 6/10/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-112 WELL NUMBER OR NAME

28' LINEAR FEET OF DRILLING

28' LINEAR FEET OF COMPLETION

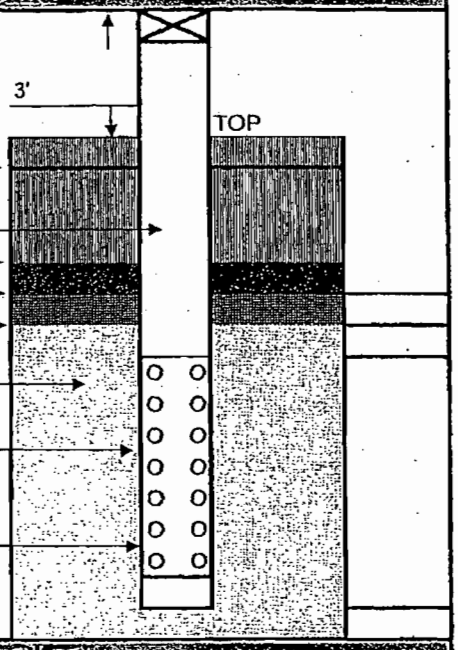
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	19'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH 80 PVC
Bottom of bore	28'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	Ø
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

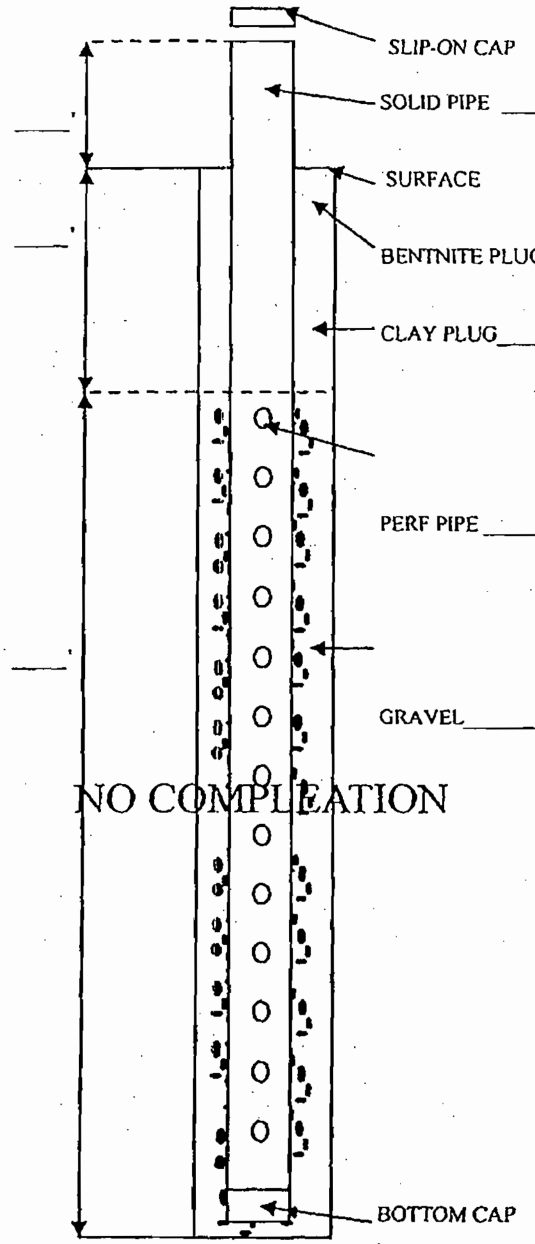
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-112
Date: TUE. 6/10/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	28 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	MULCH/SAND	NONE	DRY
2-5	WOOD/CARPET	SLIGHT	9[illegible]
5-10	CARPET/SAND	↓	87
10-15	SAND/WOOD	↓	9[illegible]
15-20	WOOD/ROOF TILES	↓	96
20-28	SAND/WOOD	↓	93
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-112
28 FT.

[signature] 07/24/08.
CLIENT REPRESENTATIVE NAME & TITLE — DATE

[signature] 6/1[illegible]
QUALITY DRILLING SERVICE BILL BRILEY - SITE SUPERVISOR — DATE

GAS EXTRACTION WELL LOG

DATE: 6/9/09

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-115 WELL NUMBER OR NAME

54' LINEAR FEET OF DRILLING

54' LINEAR FEET OF COMPLETION

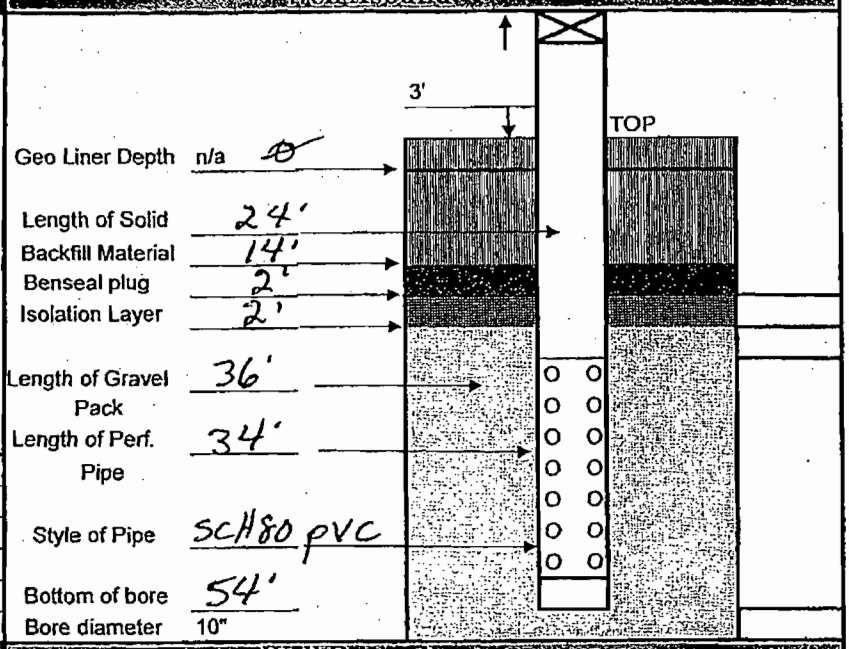
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well As-build



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	36'
Length of Perf. Pipe	34'
Style of Pipe	SCH80 PVC
Bottom of bore	54'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	1.	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

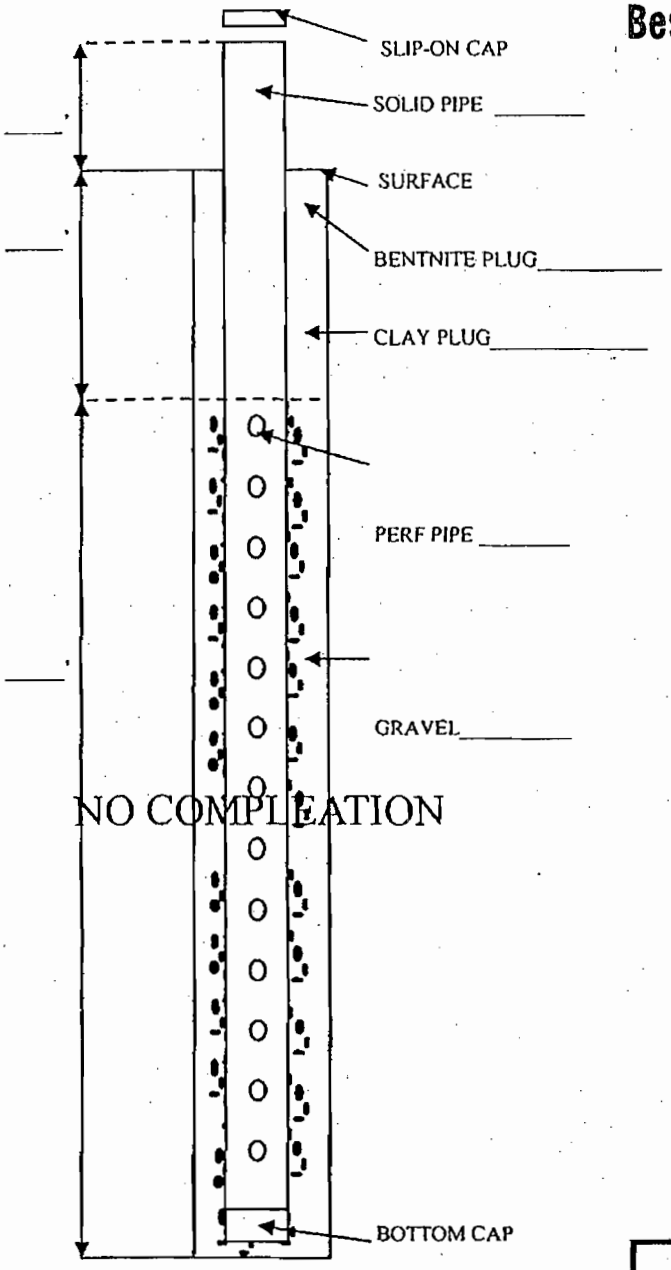
SCS SITE SUPERINTENDENT DATE

Well Number: GW-115

Date: MON. 6/9/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	54 ft.	WEATHER	LIGHTNING
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC.
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2 5	COVER/SAND/MULCH	NONE	DRY
5-20	SLUDGE/WOOD	MOSTLY	WET 94°
21-30	WOOD/PAPER	SLIGHT	DRY 95
31-40	REBAR/WOOD	↓	96°
41-50	CARPET/WOOD	↓	99
51-60	SAND/PLASTIC	↓	↓ 96°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-115
54 ft.

Satwardhan 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Arthur J. Light 6/9/08
QUALITY DRILLING SERVICE DATE
BILL BRILEY - SITE SUPERVISOR

Best Available Copy

GAS EXTRACTION WELL LOG

DATE: 6/05/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-116 WELL NUMBER OR NAME

77' LINEAR FEET OF DRILLING

77' LINEAR FEET OF COMPLETION

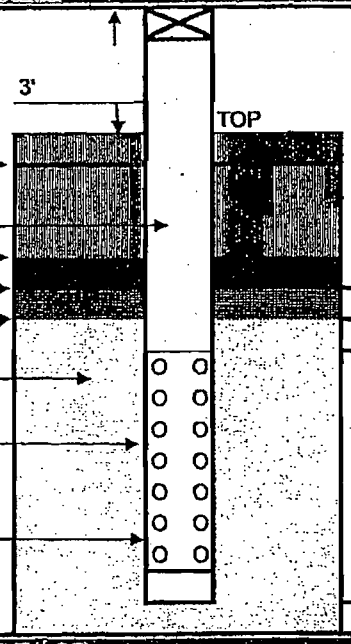
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	24'
Backfill Material	14
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	59'
Length of Perf. Pipe	57'
Style of Pipe	SCH.80 PVC
Bottom of bore	77'
Bore diameter	10"

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	Ø
8:00	↓	↓	↓
9:00			
10:00			
11:00	↓	↓	↓
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Well Boring Log

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gatwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

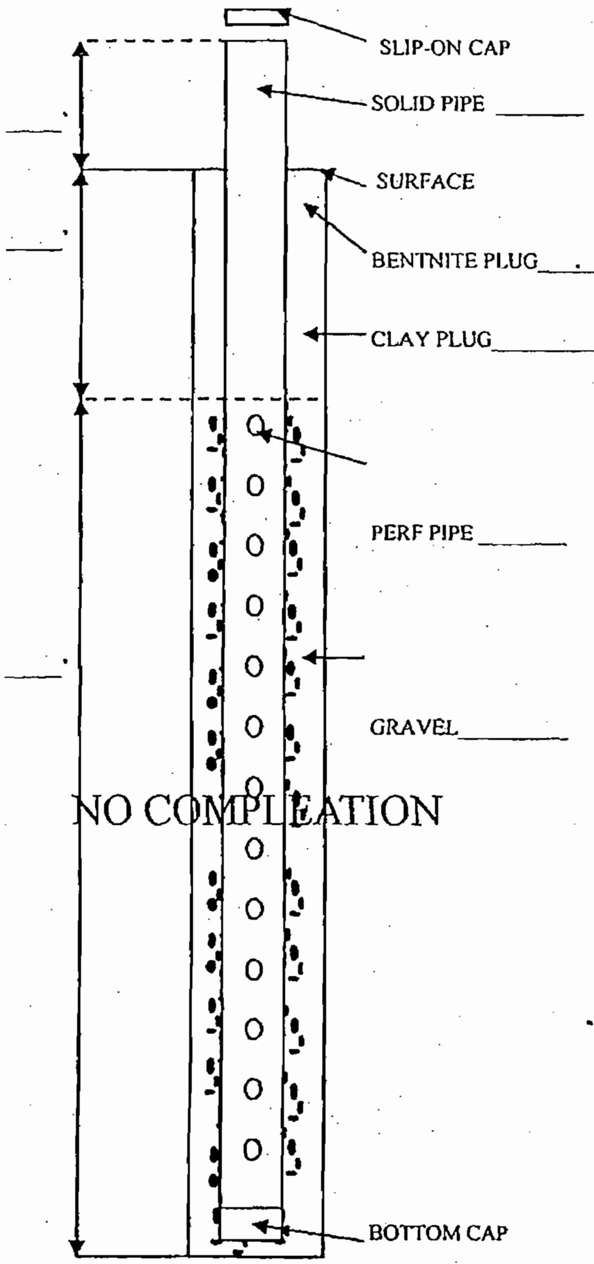
QUALITY DRILLING SERVICE

Well Number: GW-116

DRILLING & COMPLETION LOG

Date: THUR 6/5/08

Best Available Copy



DRILL	77 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2__	COVER/SAND	NONE	DRY
_2-20	SHINGLES	SLIGHT	93°
21-30	FLYASH		99°
31-40	SAND/BRICKS		100°
41-50	REBAR/TIRES		103°
51-60	SAND/WOOD		100°
61-70	CONCRETE/REBAR		97°
71-80	SAND/PAPER		101°
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

FINISH WELL GW-116 TO DEPTH OF 77 FT. SET PIPE & MOVE TO GW-118. DRILL GW-118 TO 77 FT. MOVE DRILL TO WELL # GW-119. DRILL TO 49 FT. AND HAVE TO STOP FOR THE DAY AT 5:15 WHEN SITE CLOSES. WILL FINISH DRILLING IN THE MORNING.

Patwardhan 07/24/08

CLIENT REPRESENTATIVE — DATE

NAME & TITLE

[signature] 6/5/08

QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 6/04/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-117 WELL NUMBER OR NAME

86' LINEAR FEET OF DRILLING

86' LINEAR FEET OF COMPLETION

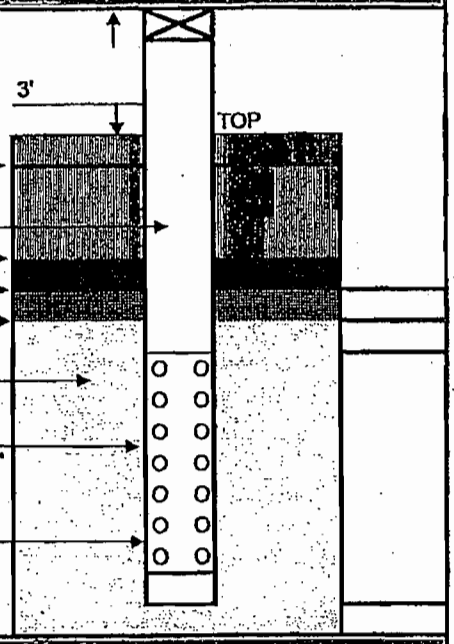
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth: n/a

Length of Solid: 24'

Backfill Material: 14'

Benseal plug: 2'

Isolation Layer: 2'

Length of Gravel Pack: 68'

Length of Perf. Pipe: 66'

Style of Pipe: SCH 80 PVC

Bottom of bore: 86'

Bore diameter: 10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

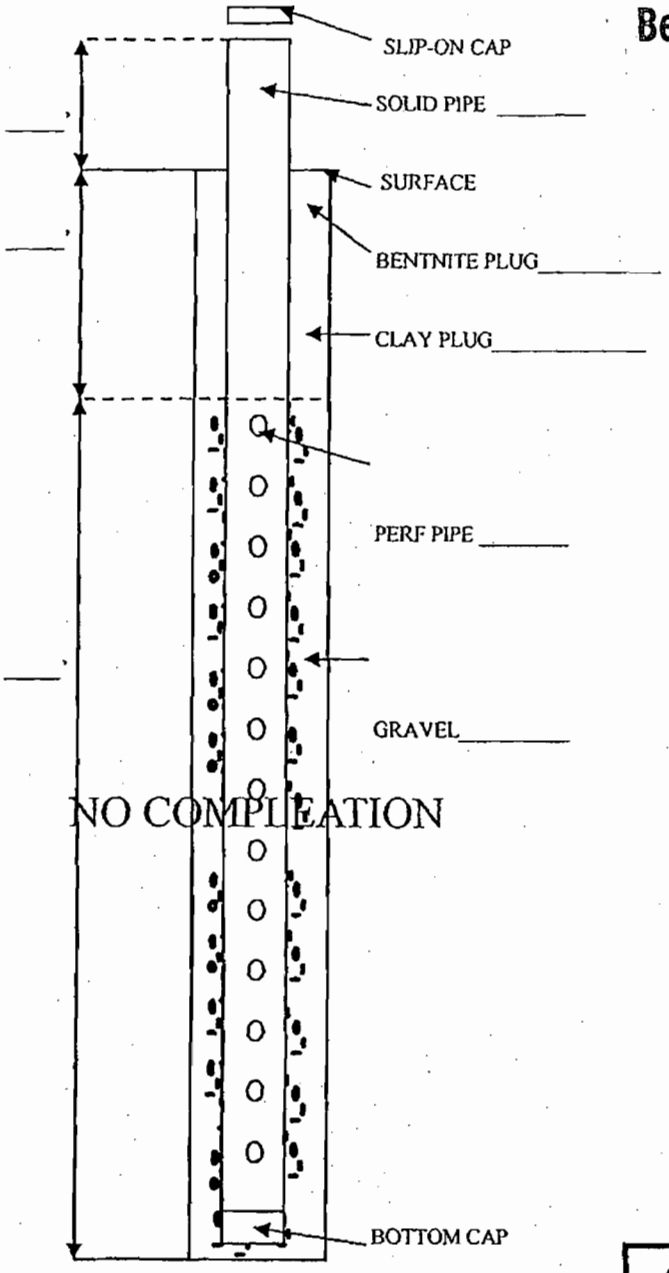
QUALITY DRILLING SERVICE

Well Number: GW-117

Date: WED. 6/4/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	86 ft	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	2x4's/PLASTIC	SLIGHT	100°
21-30	SAND/REBAR		101
31-40	" "		107°
41-50	PLYWOOD/SAND		106
51-60	WIRE/TIRE		109°
61-70	SAND/WOOD		111
71-80	WOOD/CONCRETE	MODERATE	110°
81-90	DIRT/PLASTIC	MOSTLY	WET 11
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

FINISH DRILLING AT GW-117. REACH TARGET DEPTH OF 86 FT. SET PIPE & MOVE TO GW-116. TOTAL DEPTH TO BE 77 FT. STOP FOR THE DAY AT 20 FT. TO PICK UP NEW CABLE FOR DRILL RIG. FINISH DRILLING GW-116 IN THE MORNING

Jatwardhan 07/24/08.

CLIENT REPRESENTATIVE NAME & TITLE — DATE

Arthur D. Craft 6/4/08

QUALITY DRILLING SERVICE — DATE

DRILLER — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/04/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-118 WELL NUMBER OR NAME

77' LINEAR FEET OF DRILLING

77' LINEAR FEET OF COMPLETION

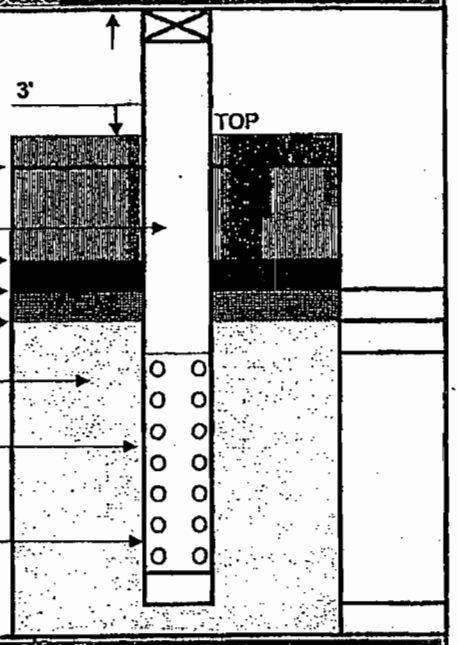
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	59'
Length of Perf. Pipe	57'
Style of Pipe	SCH 80 PVC
Bottom of bore	77'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	Ø
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

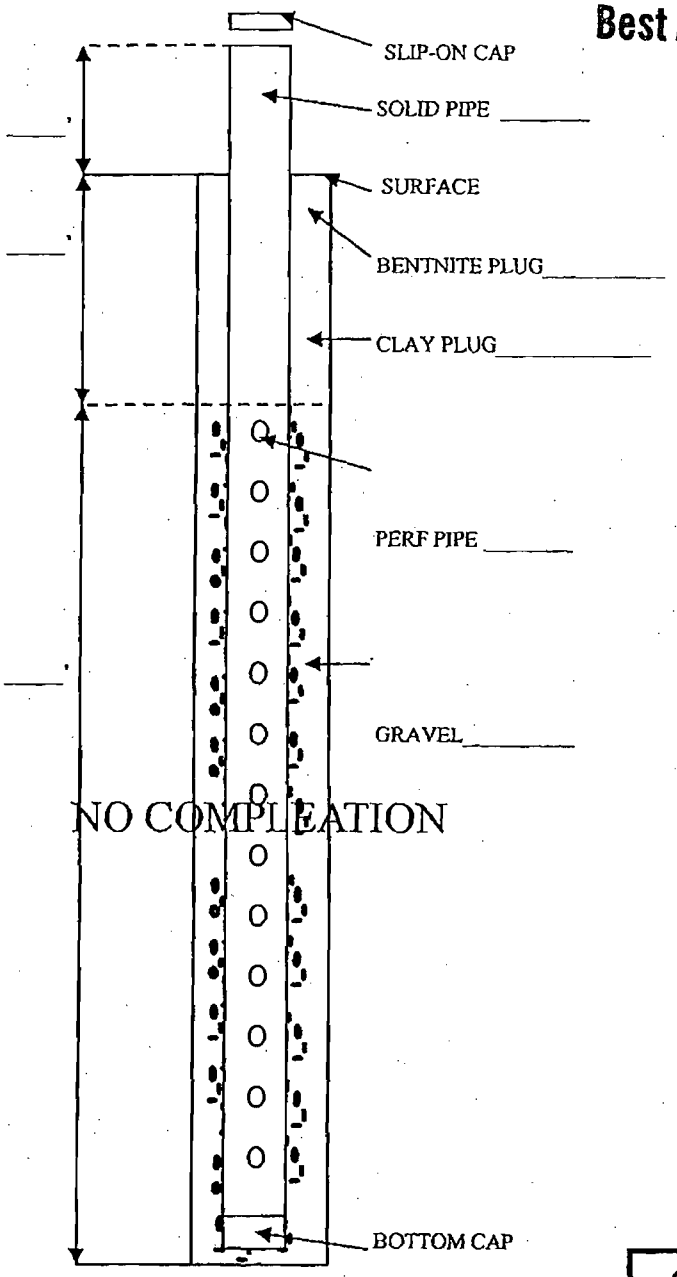
QUALITY DRILLING SERVICE

Well Number: GW-118

Date: THUR. 6/4/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	77 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/MULCH	NONE	DRY
2-20	FLY ASH	SLIGHT	104°
21-30	WOOD/PLASTER		107
31-40	WOOD/STEEL		107
41-50	SAND/SHINGLES		109
51-60	PLYWOOD		111
61-70	5' OF SAND		110
71-80	SAND/2X4'S		107
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-118
77 FT.

Jantwardhan 07/24/08

CLIENT REPRESENTATIVE — DATE

NAME & TITLE

Arthur D. Crisp 6/4/08

QUALITY DRILLING SERVICE — DATE

BILL RILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/5/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-119 WELL NUMBER OR NAME

66' LINEAR FEET OF DRILLING

66' LINEAR FEET OF COMPLETION

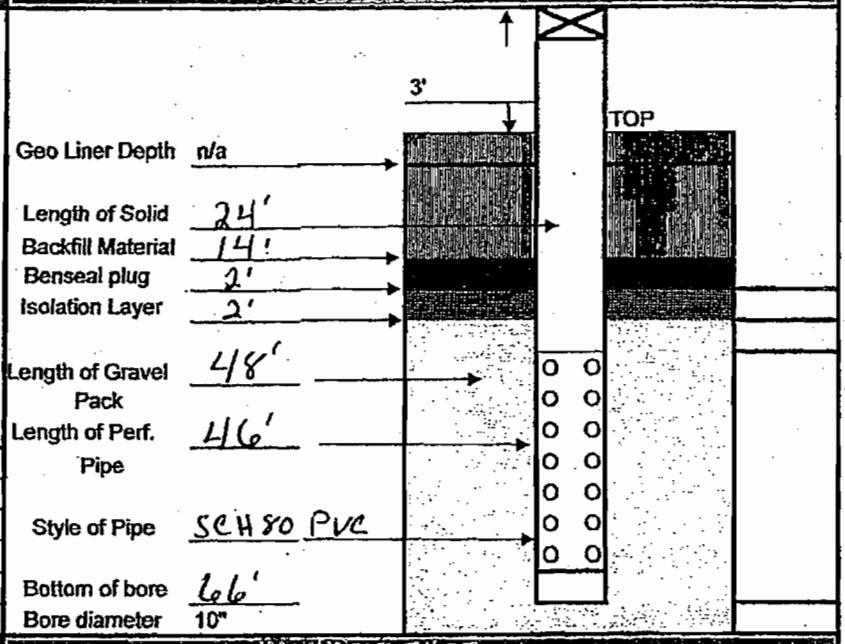
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	48'
Length of Perf. Pipe	46'
Style of Pipe	SCH 80 PVC
Bottom of bore	66'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	Ø
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

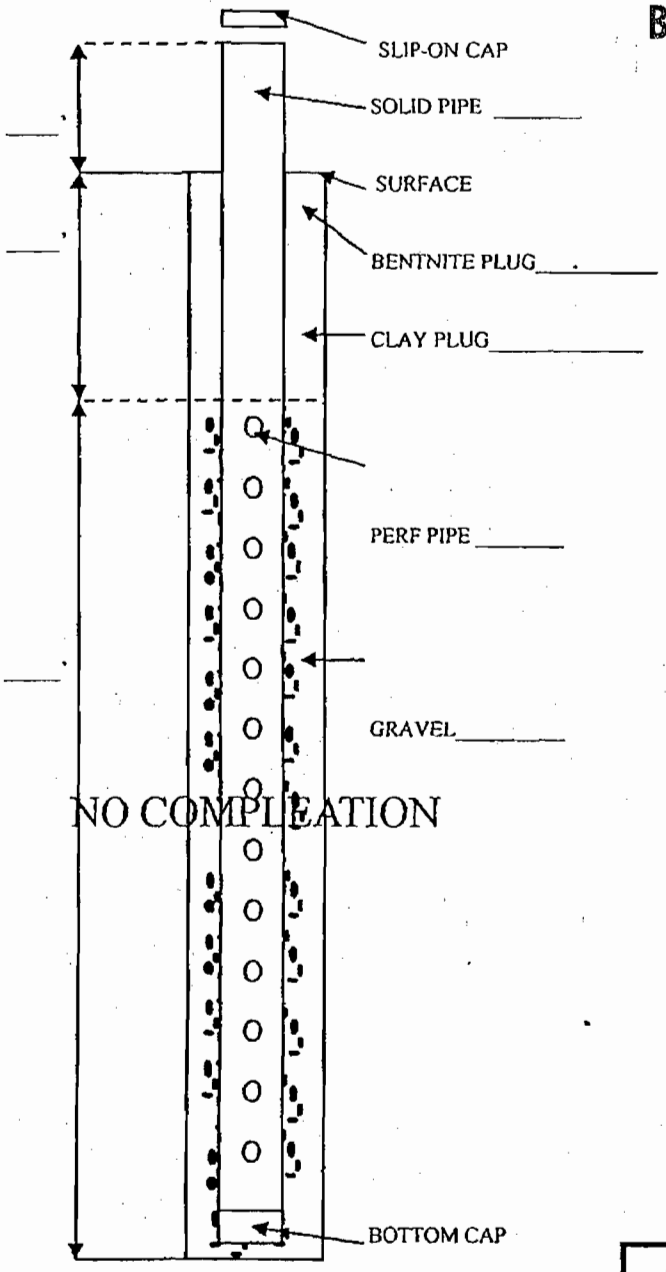
QUALITY DRILLING SERVICE

Well Number: GW-119

DRILLING & COMPLETION LOG

Date: ~~THUR~~. FRI. 6/5/08

Best Available Copy



NO COMPLEATION

DRILL	6 6A.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/MULCH	NONE	DRY
2-20	PLYWOOD	SLIGHT	101°
21-30	SHINGLES		97°
31-40	SAND/BRICKS		95°
41-50	SAND/CONCRETE		99°
51-60	WOOD/REBAR		102°
61-70	WOOD/SAND	↓	↓ 101°
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

(66')

FINISH AT WELL # GW-119. SET PIPE. MOVE TO WELL # GW-120. DRILL TO 67FT. SETPIPE & MOVE RIG TO NEXT LOCATION AT. GW-121. DRILL TO A DEPTH OF 67 FT. SET. PIPE. MOVE TO WELL GW-122. DRILL TO THE TARGET DEPTH OF 55 FT. ~~SET~~ SET PIPE AND SHUT DOWN FOR THE DAY. DEPART SITE.

Jeff Wardlaw 07/24/08.

CLIENT REPRESENTATIVE DATE

NAME & TITLE

Andrew D. Cruz 6/5/08

QUALITY DRILLING SERVICE DATE

BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/05/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-120 WELL NUMBER OR NAME

67' LINEAR FEET OF DRILLING

67' LINEAR FEET OF COMPLETION

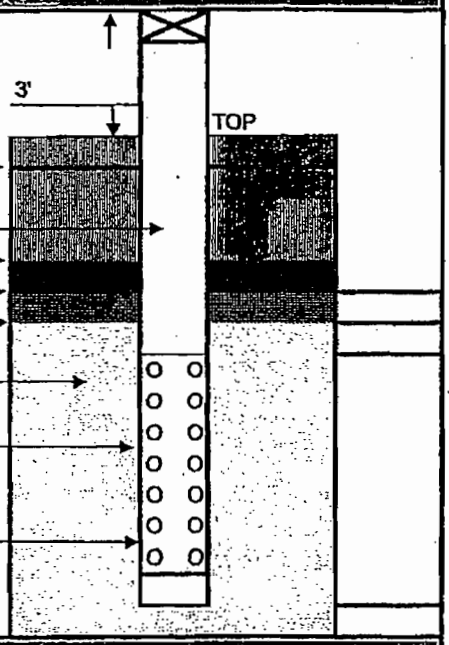
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	49'
Length of Perf. Pipe	47'
Style of Pipe	Sch.80 PVC
Bottom of bore	67'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	Ø
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

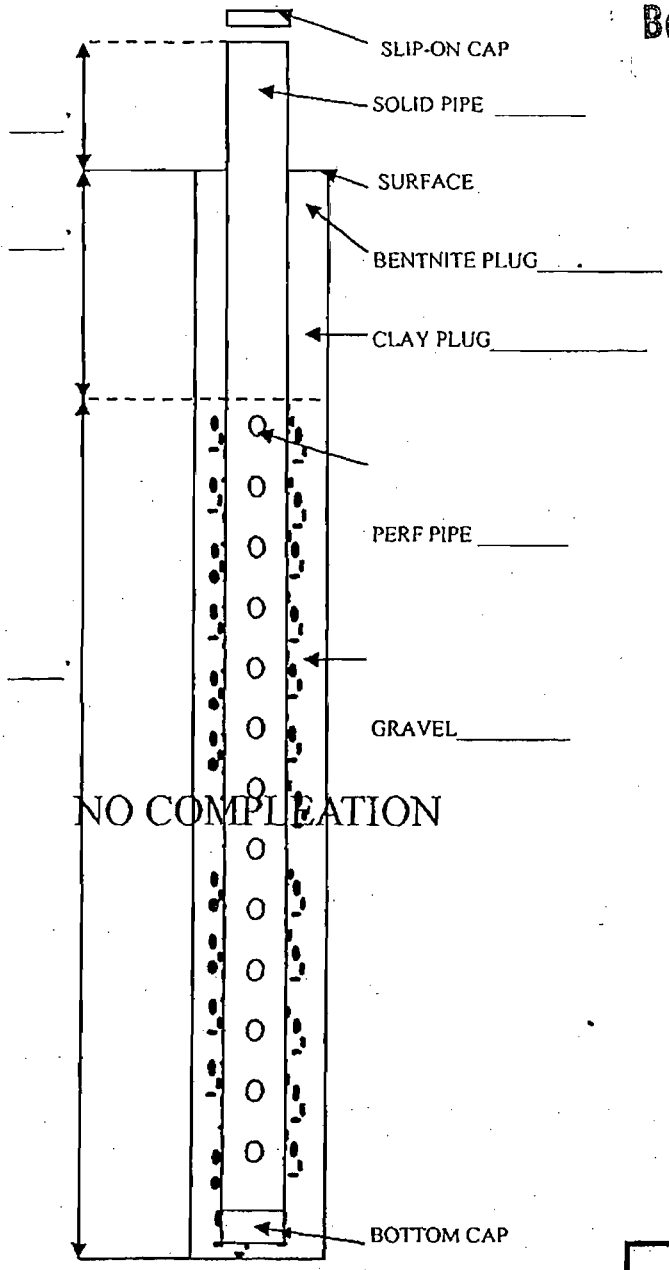
QUALITY DRILLING SERVICE

Well Number: GW-120

Date: FRI. 6/5/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	67 FT.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-20	SAND/WOOD	SLIGHT	92°
21-30	WOOD/CONCRETE		92°
31-40	SAND -5 FT.		99°
41-50	SAND/CONCRETE		101°
51-60	CONCRETE/REBAR		102°
61-70	SAND/BRICKS		100°
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-120
67 FT.

Satwardhan 07/24/08.

CLIENT REPRESENTATIVE NAME & TITLE — DATE

Arthur D. Craft 6/5/08

QUALITY DRILLING SERVICE — DATE

BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/06/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-121 WELL NUMBER OR NAME

66' LINEAR FEET OF DRILLING

66' LINEAR FEET OF COMPLETION

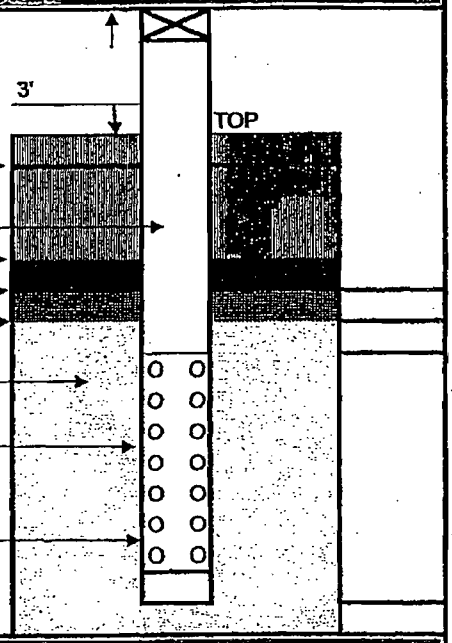
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth: n/a

Length of Solid: 24'

Backfill Material: 14'

Benseal plug: 2'

Isolation Layer: 2'

Length of Gravel Pack: 48'

Length of Perf. Pipe: 46'

Style of Pipe: SCH 80 PVC

Bottom of bore: 66'

Bore diameter: 10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	Ø
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			↓
3:00	↓	↓	
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

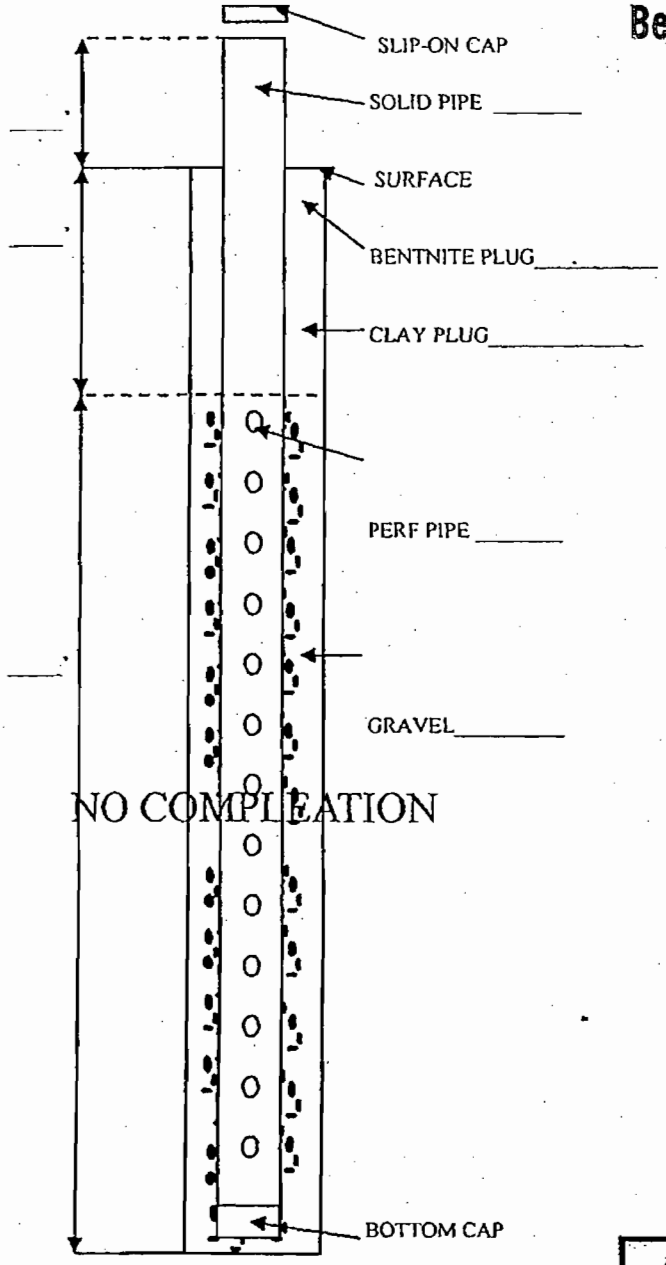
Project Name: Orange County

Well Number: GW-121

Date: FRI. 6/6/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	6hr.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-20	WOOD/SHINGLES	SLIGHT	93°
21-30	FLY ASH		99°
31-40	SAND/WOOD		102°
41-50	CONCRETE/PIPE		104°
51-60	REBAR/CONCRETE		107°
61-70	SAND/WOOD		105°
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-121
65 FT.

Saturwadhan 07/24/08
CLIENT REPRESENTATIVE NAME & TITLE — DATE

Arthur D. Cyr 6/6/08
QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 6/06/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

GW-122 WELL NUMBER OR NAME

55' LINEAR FEET OF DRILLING

55' LINEAR FEET OF COMPLETION

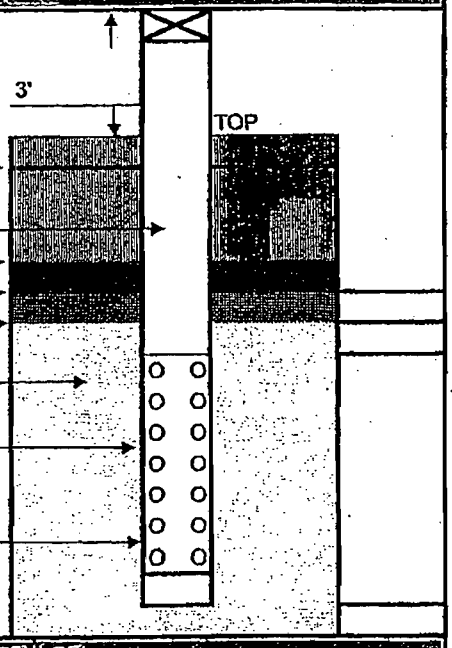
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	37'
Length of Perf. Pipe	35'
Style of Pipe	SCH 80 PVC
Bottom of bore	55'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	Ø
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

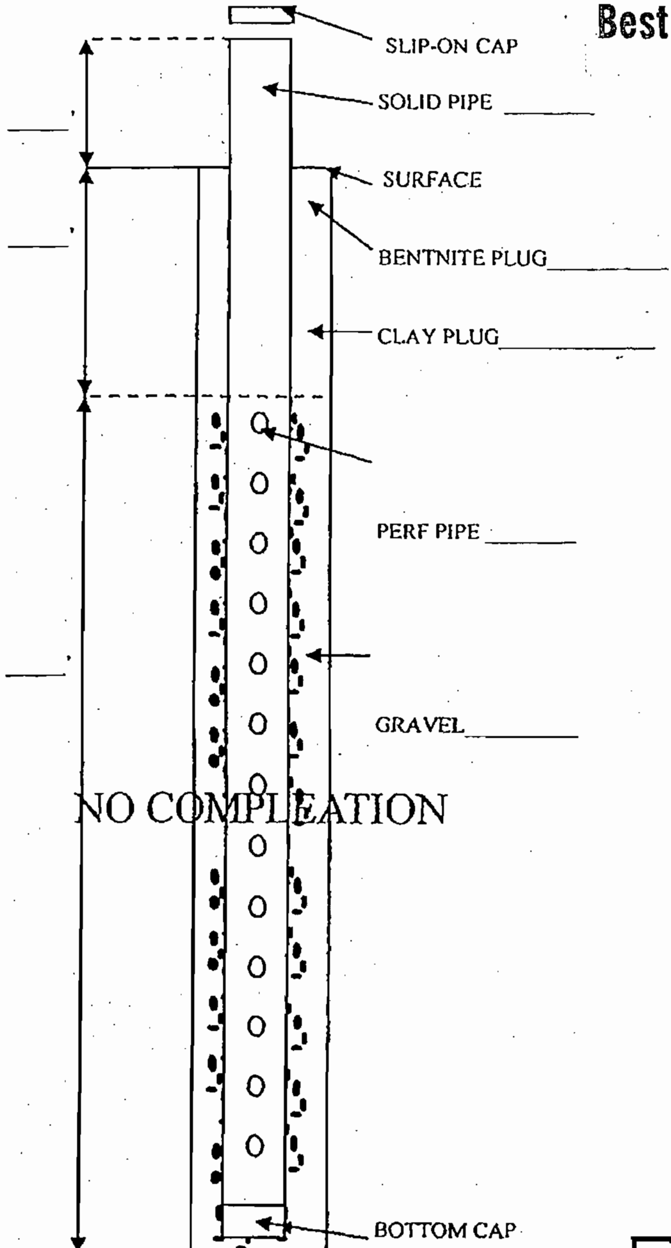
Project Name: Orange County

Well Number: GW-122

Date: FRI. 6/6/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	55 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	SAND/CONCRETE	SLIGHT	96
21-30	TIRES/WOOD	↓	100
31-40	STEEL/WOOD	↓	99
41-50	SAND/BRICKS	↓	97
51-60	SAND/PLASTIC	↓	95°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-122
55 FT.

[signature] 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

[signature] 6/6/08
QUALITY DRILLING SERVICE DATE
BILL BRILEY - SITE SUPERVISOR

Best Available Copy

GAS EXTRACTION WELL LOG

DATE: 6/2/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-123 WELL NUMBER OR NAME

75' LINEAR FEET OF DRILLING

75' LINEAR FEET OF COMPLETION

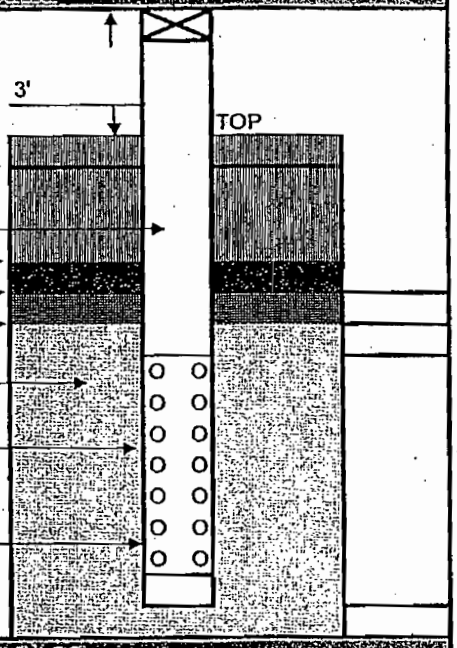
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	12'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	59'
Length of Perf. Pipe	55'
Style of Pipe	sch80 PVC
Bottom of bore	75'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	5.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

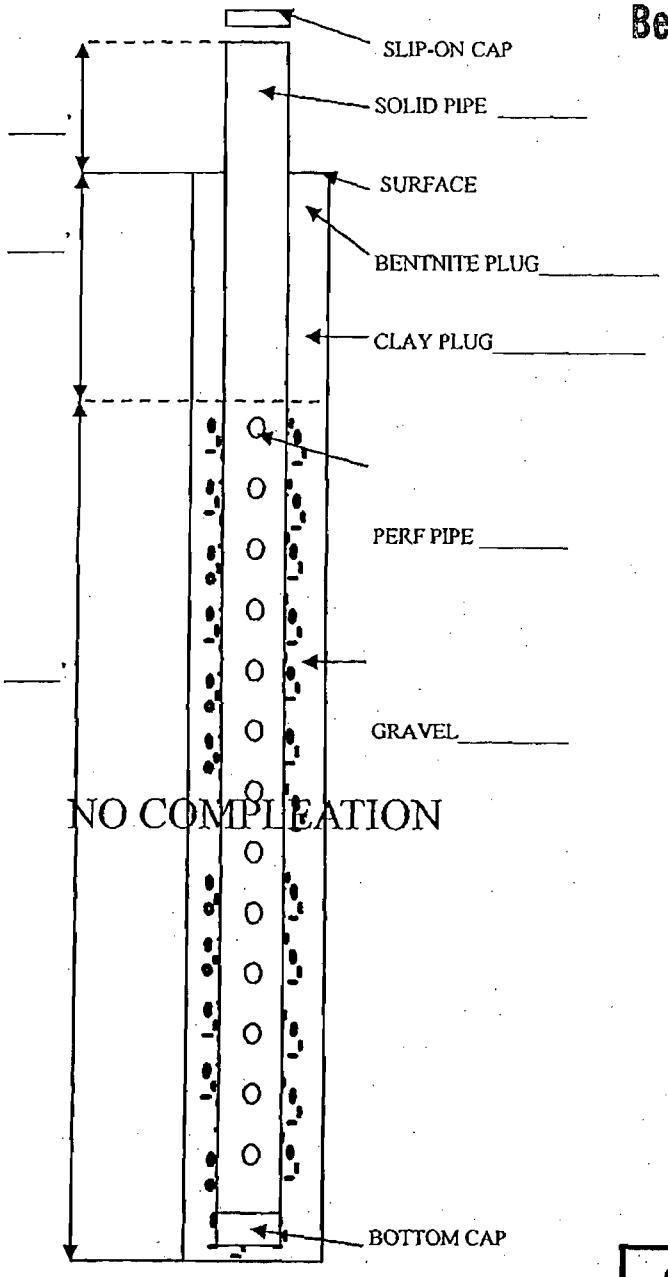
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-123
Date: MON. 6/2/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	75 ft	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	CARPET/WIRE	SLIGHT	97
21-30	TIRE/SAND		99
31-40	CONCRETE/SAND		105
41-50	SAND/WOOD		104
51-60	SAND/LOGS.		110
61-70	PLASTIC/WIRE		109
71-80	CONCRETE/SAND		
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

FINISH WELL GW-123 AT 75 ft. SET PIPE AND MOVE TO GW-124 DRILL TO DEPTH OF 33 ft. SET PIPE. MOVE DRILL MACHINE TO GW-125 AND DRILL TO 38 ft. SET PIPE. MOVE RIG TO GW-126. DRILL TO 51 ft. SET PIPE. AND BEGIN DRILLING AT GW-127 TOWARDS 51 ft. STOP DRILLING AT GW-127 AT 25 ft. FOR THE NIGHT. DEPART SITE.

Gatewardhan 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Arthur J. Gallagher 6/2/08
QUALITY DRILLING SERVICE DATE
BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/2/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-124 WELL NUMBER OR NAME

33' LINEAR FEET OF DRILLING

33' LINEAR FEET OF COMPLETION

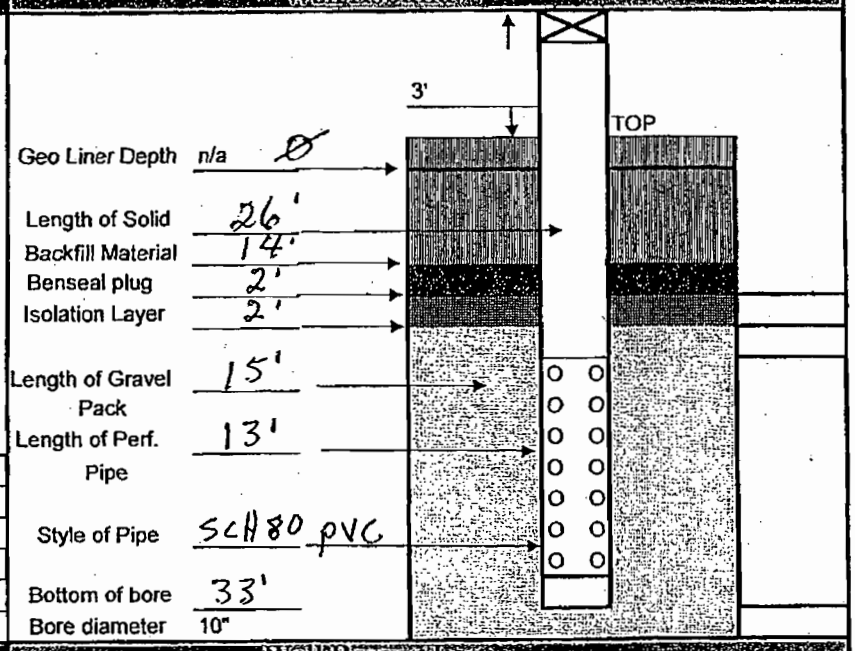
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	26'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	15'
Length of Perf. Pipe	13'
Style of Pipe	SCH80 PVC
Bottom of bore	33'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	5.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

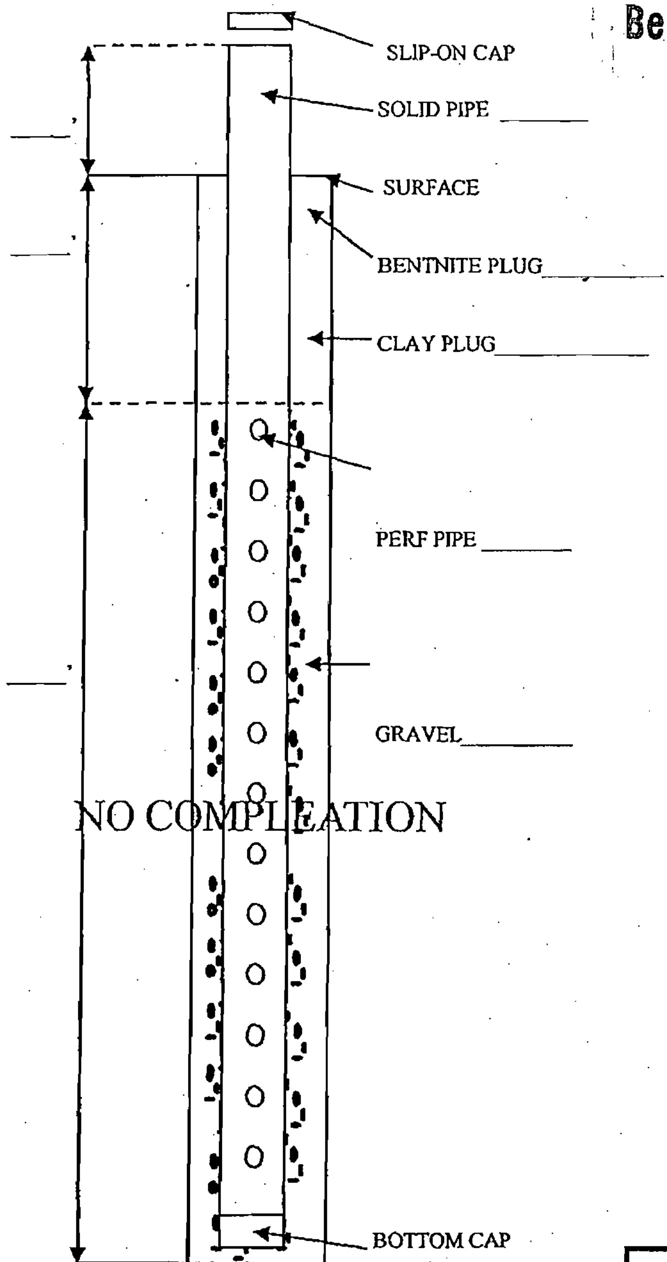
SCS SITE SUPERINTENDENT DATE

Well Number: GW-124

Date: MON. 6/2/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	33ft	WEATHER	CLEAR/HOT
COMP.	}	START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-20	HHT/FABRIC	SLIGHT	94°
21-30	SAND/BRUSH	↓	99°
31-40	WOOD/STEEL STRAPS	↓	↓ 104°
41-50			
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-124

33FT.

[signature] 07/24/08.

CLIENT REPRESENTATIVE NAME & TITLE — DATE

[signature] 6/2/08

QUALITY DRILLING SERVICE — DATE

BILL DRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/2/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-125 WELL NUMBER OR NAME

38' LINEAR FEET OF DRILLING

38' LINEAR FEET OF COMPLETION

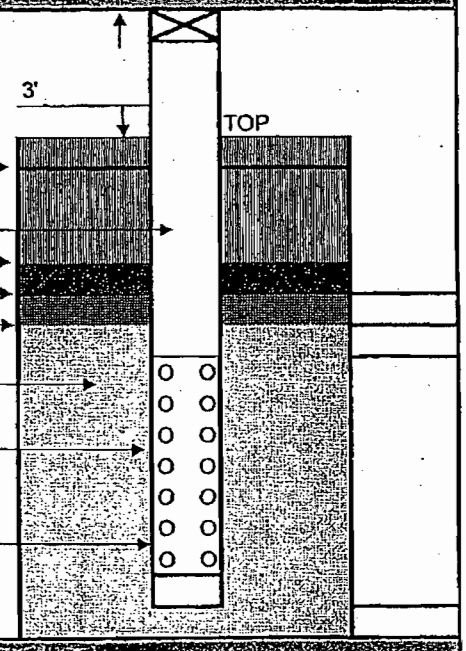
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a	0
Length of Solid		25'
Backfill Material		14'
Benseal plug		2'
Isolation Layer		2'
Length of Gravel Pack		20'
Length of Perf. Pipe		18'
Style of Pipe		SCH 80 PVC
Bottom of bore		38'
Bore diameter		10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	5.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

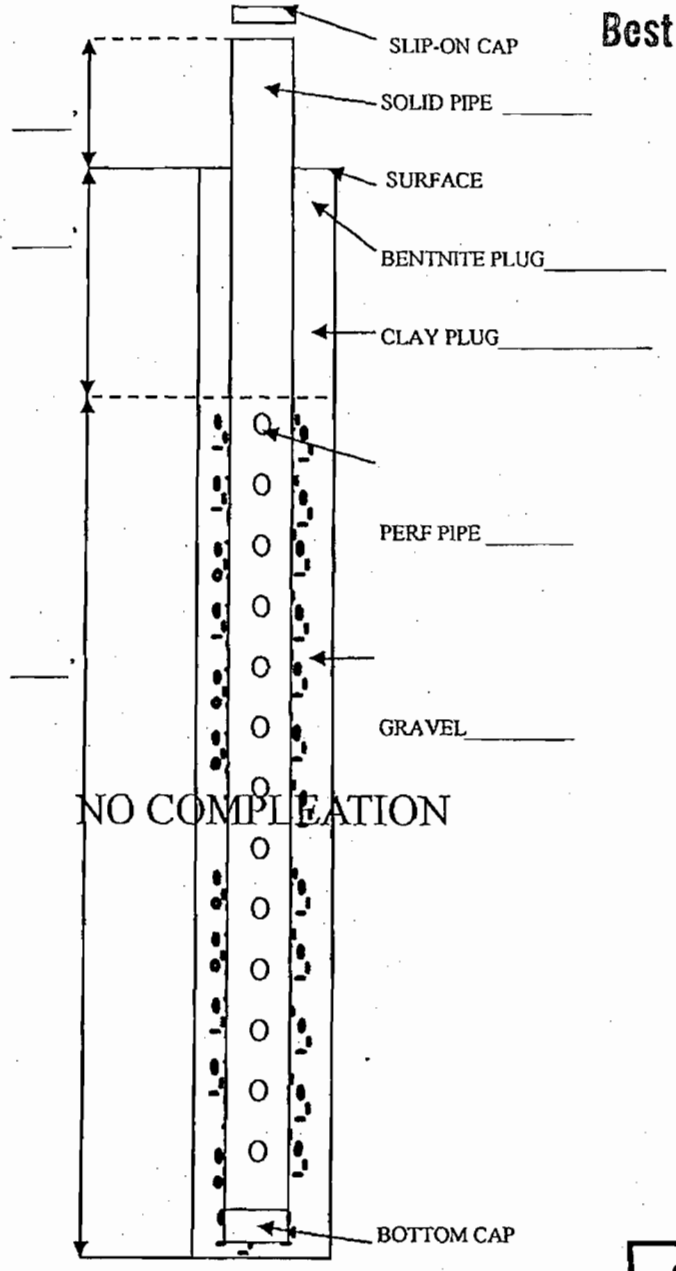
SCS SITE SUPERINTENDENT DATE

Well Number: GW-125

Date: MON. 6/2/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	38ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	MULCH/SAND	NONE	DRY
2-20	WOOD/SAND	SLIGHT	97°
21-30	SAND/I-BEAM	↓	104
31-40	SAND/CONCRETE	↓	104°
41-50			
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-125
38 ft.

Gatwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

NAME & TITLE

6/2/08

QUALITY DRILLING SERVICE DATE

BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/2/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-126 WELL NUMBER OR NAME

51' LINEAR FEET OF DRILLING

51' LINEAR FEET OF COMPLETION

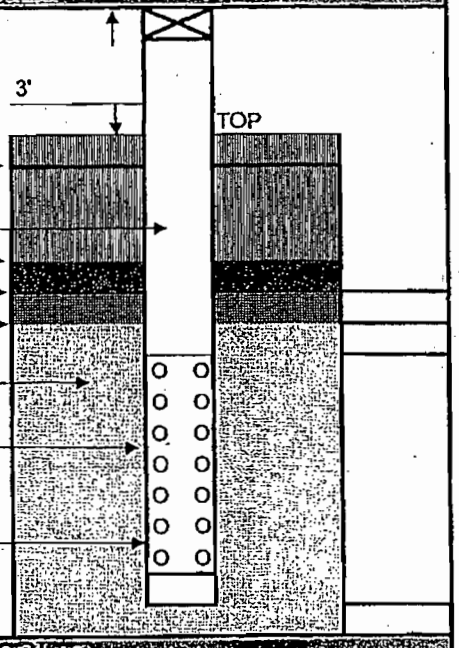
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	26'
Backfill Material	13'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	34'
Length of Perf. Pipe	31'
Style of Pipe	SCH80 PVC
Bottom of bore	51'
Bore diameter	10"

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	3.	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Well Boring Log

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

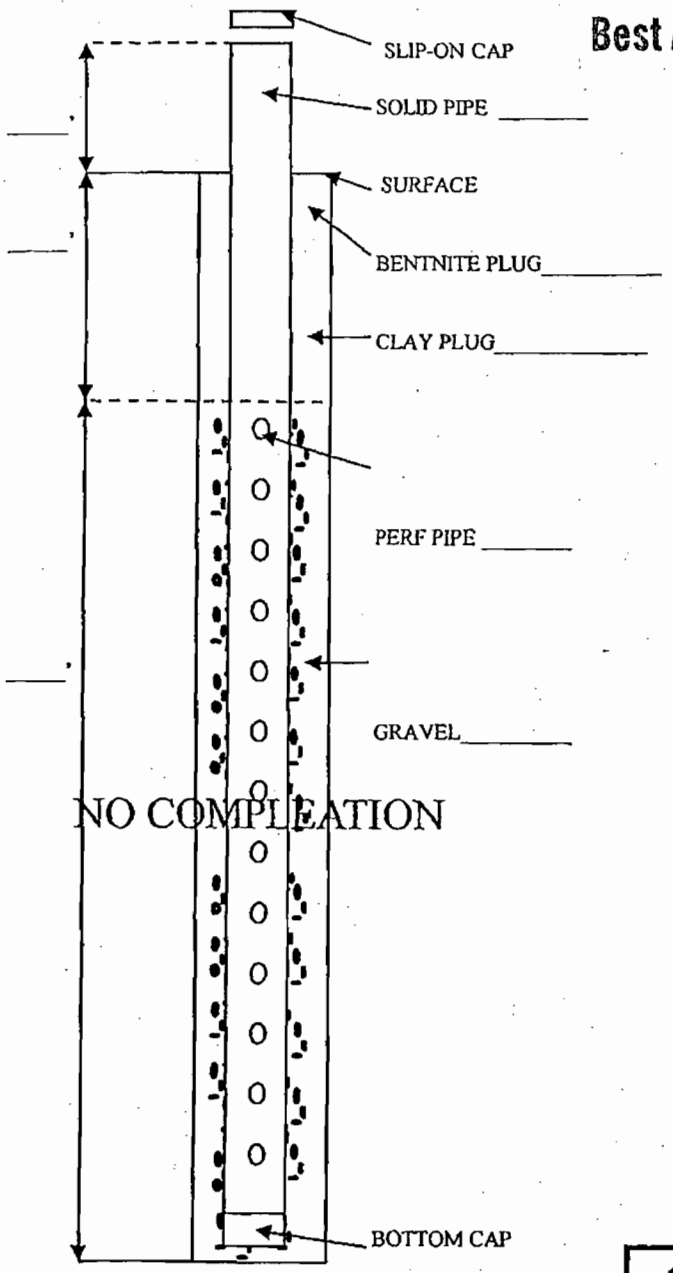
SCS SITE SUPERINTENDENT DATE

Well Number: GW-126

Date: 6/02/08 MON.

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	51 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/MULCH	NONE	DRY
2-20	CARPET/SAND	SLIGHT	100°
21-30	SAND-5+ ft.		109°
31-40	WOOD/SAND		109°
41-50	STEEL CABLE		112
51-60	SAND/WOOD		111°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-126
51 FT.

Satwardhan 07/24/08

CLIENT REPRESENTATIVE NAME & TITLE — DATE

Joshua D. Cyr 6/2/08

QUALITY DRILLING SERVICE — DRILL RIG SUPERVISOR — DATE

GAS EXTRACTION WELL LOG

DATE: 6/03/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-127 WELL NUMBER OR NAME

51' LINEAR FEET OF DRILLING

51' LINEAR FEET OF COMPLETION

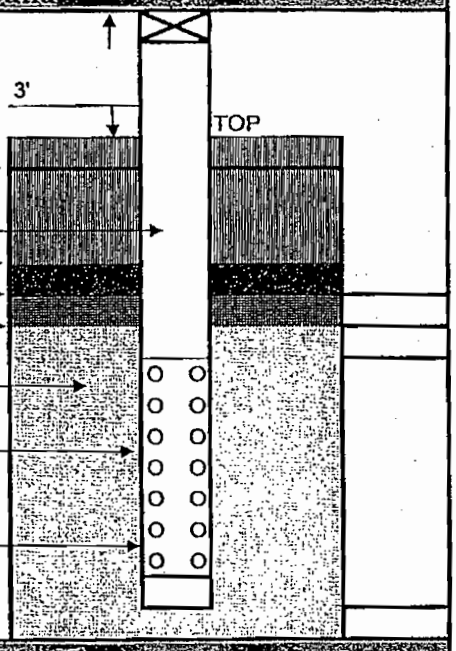
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	2	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

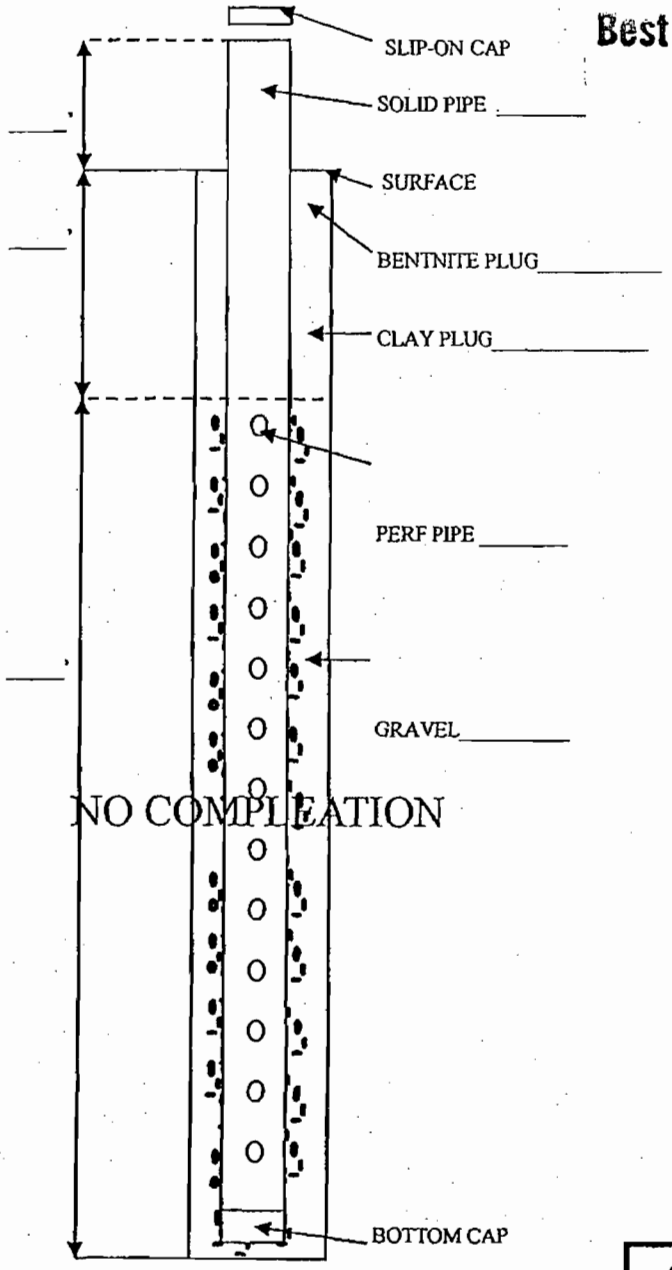
Project Name: Orange County

Well Number: GW-127

Date: TUE 6/3/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	51ft	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	PLYWOOD	SLIGHT	94°
21-30	STEEL/SAND		97°
31-40	SAND/CARPET		99°
41-50	WOOD/CARPET		103°
51-60	SAND/FABRIC	↓	↓ 105°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

ARRIVE AT SITE AND FINISH DRILLING TO 51 ft AT GW-127. SET PIPE. MOVE TO WELL # GW-128. SET UP AND DRILL TO 52 ft MOVE TO GW-129 AND DRILL TO 5[illegible] SET PIPE. MOVE DRILL RIG TO GW-130 AND DRILL TO DEPTH OF 33 ft. SET PIPE. SET UP AT GW-117 AND BEGIN DRILLING DEPTH TO BE 86 ft. SHUT DOWN AT 5:15 WHEN SITE CLOSES (REACH 43 ft.) FINISH UP GW-117 IN THE MORNING. DEPART SITE

Jatiwardhan 07/24/08

CLIENT REPRESENTATIVE NAME & TITLE — DATE

Arthur L. [illegible] 6/3/

QUALITY DRILLING SERVICE — DATE

BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/03/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-128 WELL NUMBER OR NAME

52' LINEAR FEET OF DRILLING

52' LINEAR FEET OF COMPLETION

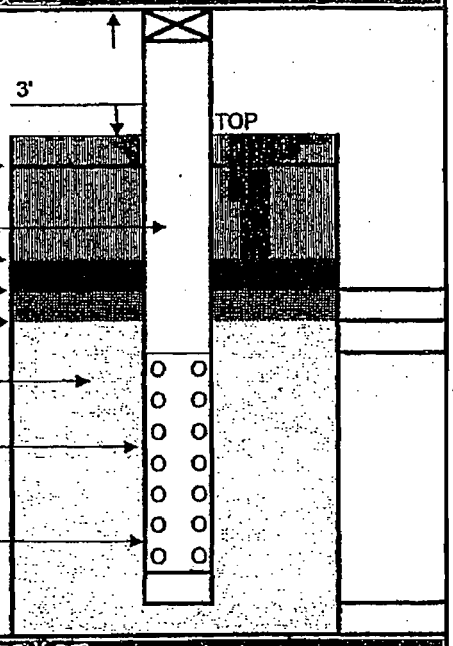
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	27'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	34'
Length of Perf. Pipe	32'
Style of Pipe	SCH 80 PVC
Bottom of bore	52'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	Ø
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

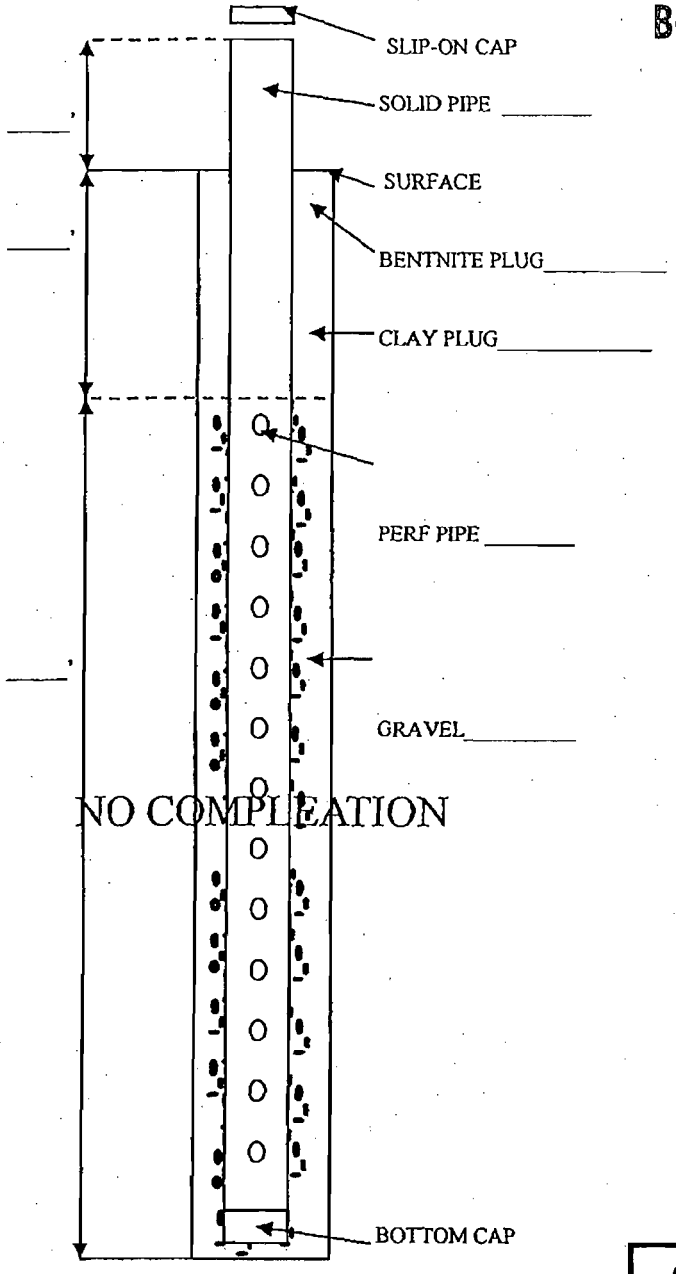
QUALITY DRILLING SERVICE

Well Number: GW-128

Date: TUE. 6/3/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	52 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/MULCH	NONE	DRY
2-20	STEEL CABLE		99°
21-30	WOOD/STEEL		103°
31-40	TIRE/CONCRETE		104°
41-50	CLAY TILES		107
51-60	STEEL PIPE/SAND		108°
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-128
52 ft.

Gatwardhan 07/24/08.
CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE
BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/03/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-129 WELL NUMBER OR NAME

50' LINEAR FEET OF DRILLING

50' LINEAR FEET OF COMPLETION

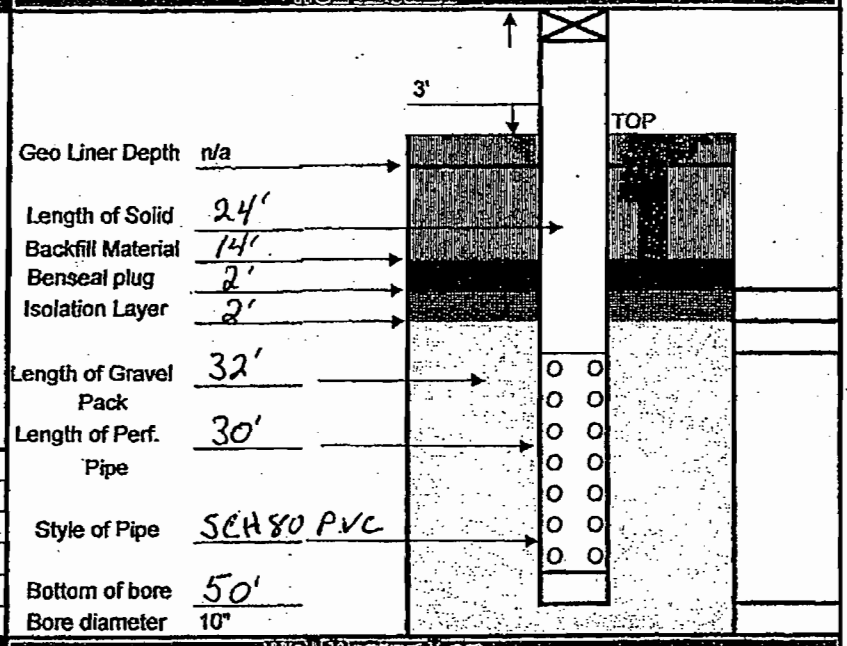
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well As-build



Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	0
8:00	↓	↓	↓
9:00	↓	↓	↓
10:00	↓	↓	↓
11:00	↓	↓	↓
12:00	↓	↓	↓
1:00	↓	↓	
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

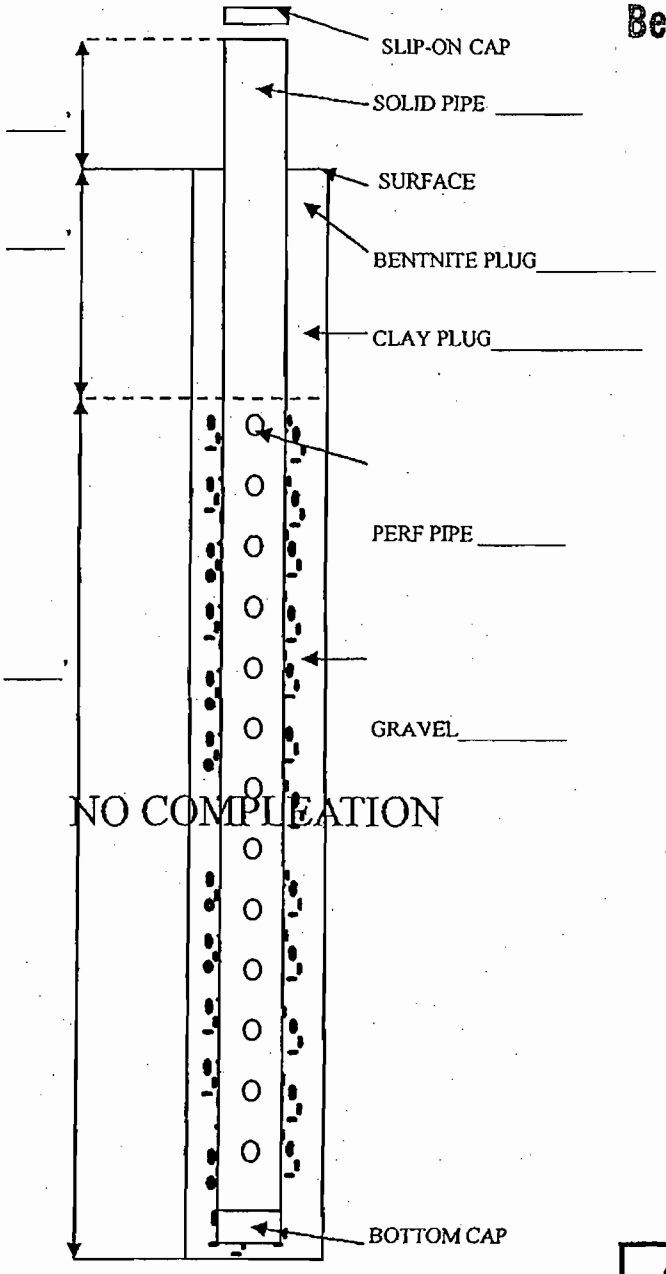
Project Name: Orange County

Well Number: GW-129

Date: TUE. 6/3/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	50 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-20	SHINGLES/SAND	SLIGHT	97
21-30	WOOD/SHINGLES		103
31-40	CONCRETE/REBAR		DAMP 103
41-50	REBAR/SAND		DRY 109
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-129
50 ft.

Gattwardhan 07/24/08
CLIENT REPRESENTATIVE NAME & TITLE — DATE

Arthur R. G. 6/3/08
QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 6/03/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-130 WELL NUMBER OR NAME

33' LINEAR FEET OF DRILLING

33' LINEAR FEET OF COMPLETION

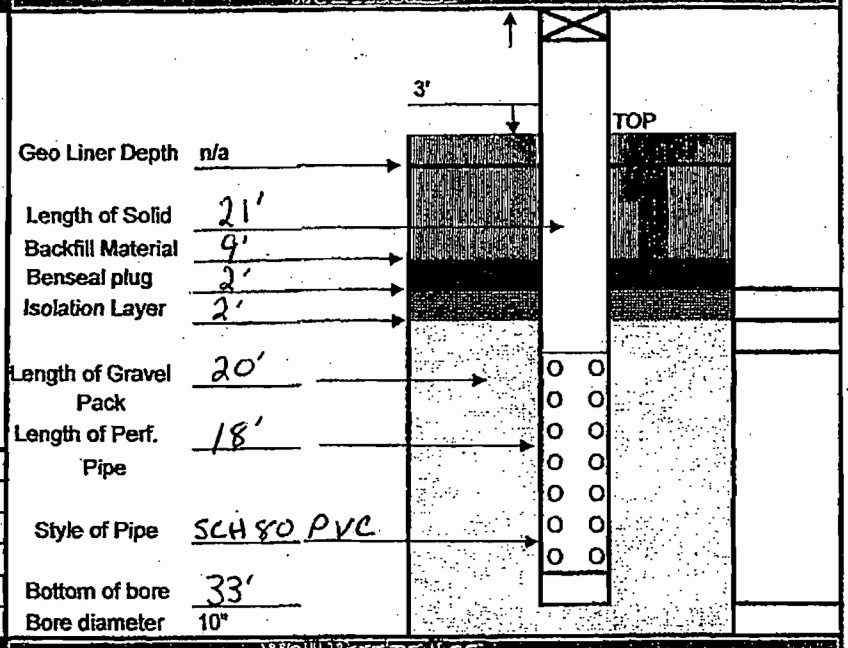
Ø LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuilt



Geo Liner Depth	n/a
Length of Solid	21'
Backfill Material	9'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	20'
Length of Perf. Pipe	18'
Style of Pipe	SCH 80 PVC
Bottom of bore	33'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	Ø
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00	↓	↓	↓
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08
CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer
NAME & TITLE

Dennis Adams
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

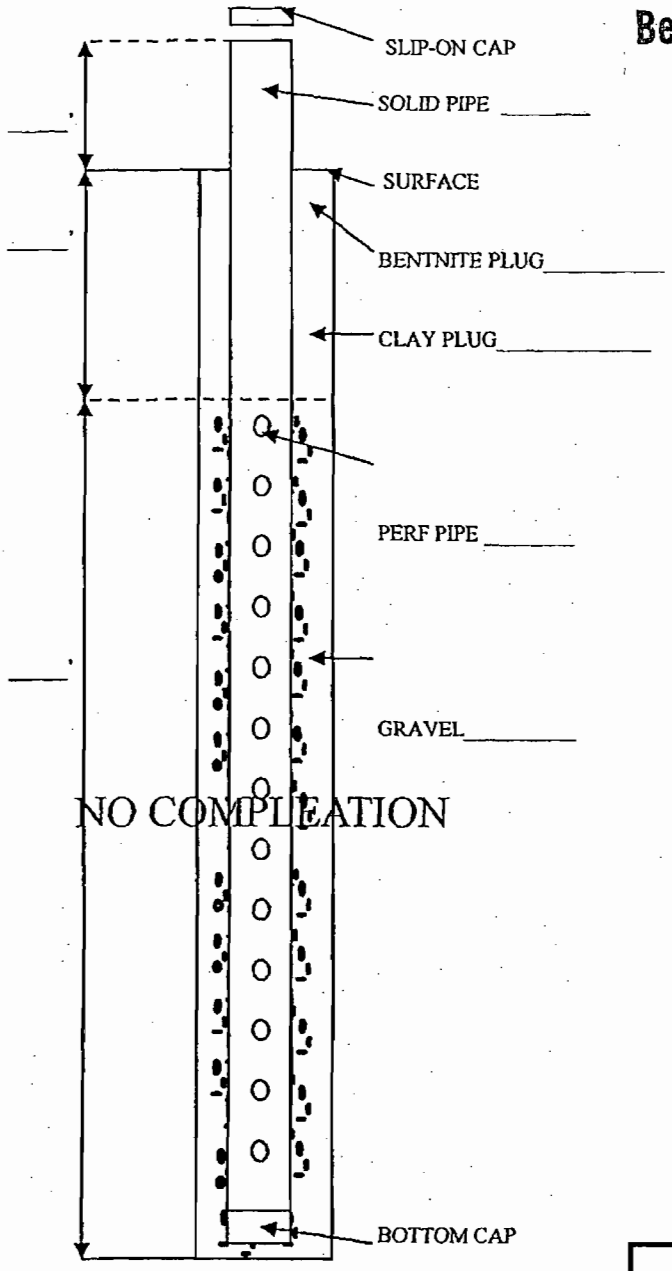
Project Name: [illegible]

Well Number: GW-130

Date: TUE. 6/3/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	33 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA. & TYPE	6" PVC SCH 80
PERF.			

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/COVER	NONE	DRY
2-20	WOOD/LOGS	SLIGHT	99°
21-30	PLYWOOD/SAND	↓	104°
31-40	SAND/REBAR	↓	107°
41-50			
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

GW-130 WELL LOG
33 ft.

Jatwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

NAME & TITLE

QUALITY DRILLING SERVICE DATE

BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/11/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-121 WELL NUMBER OR NAME

52' LINEAR FEET OF DRILLING

52' LINEAR FEET OF COMPLETION

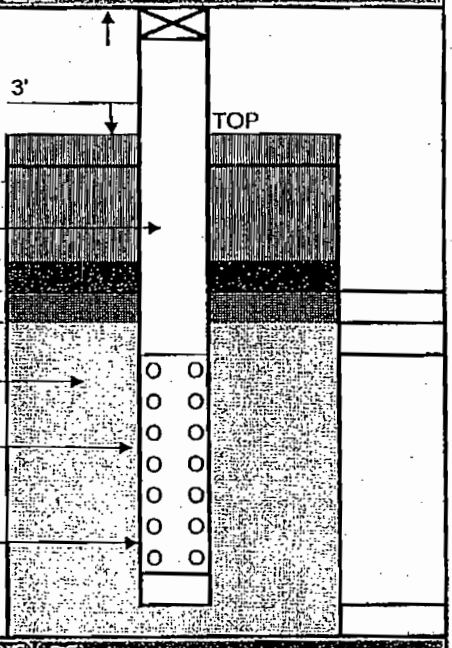
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	25'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	34'
Length of Perf. Pipe	32'
Style of Pipe	SCH 80 PVC
Bottom of bore	52'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	2	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00	↓	↓	↓
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

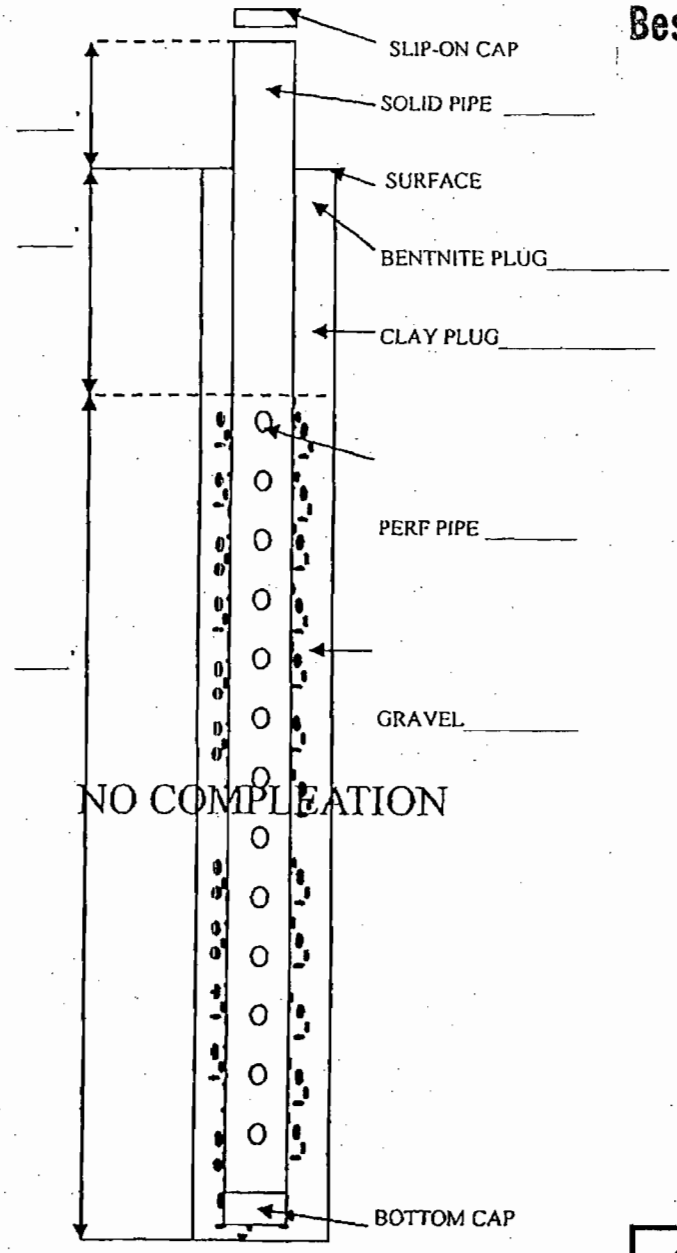
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-131
Date: WED 6/11/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	52 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA. & TYPE	6" PVC SCH. 80
PERF.			

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	STEEL/SAND	SLIGHT	9
21-30	TIRES/HYD'LIC		99
31-40	SAND/I-BEAM		9
41-50	STEEL/CONCRETE		96
51-60	SAND/WOOD		95
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-131
52 ft.

jatwardhan 07/24/08.
CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 6/11/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-132 WELL NUMBER OR NAME

51' LINEAR FEET OF DRILLING

51' LINEAR FEET OF COMPLETION

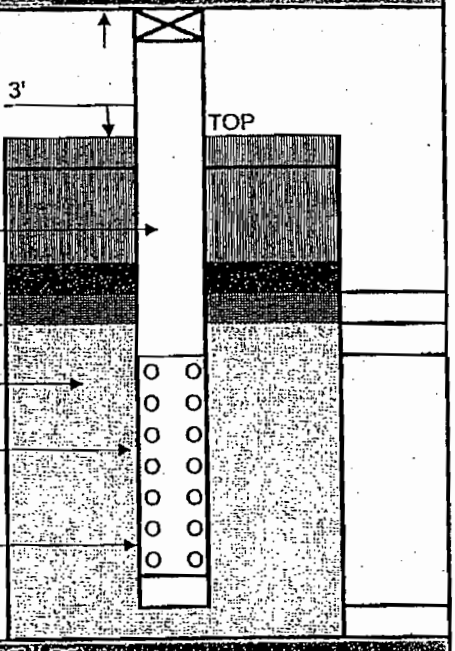
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	26'
Backfill Material	~~14'~~ 16' CP
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	31'
Length of Perf. Pipe	29'
Style of Pipe	SCH 80 PVC
Bottom of bore	51'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	2	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00	↓	↓	↓
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Satwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Satwardhan, Engineer.

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

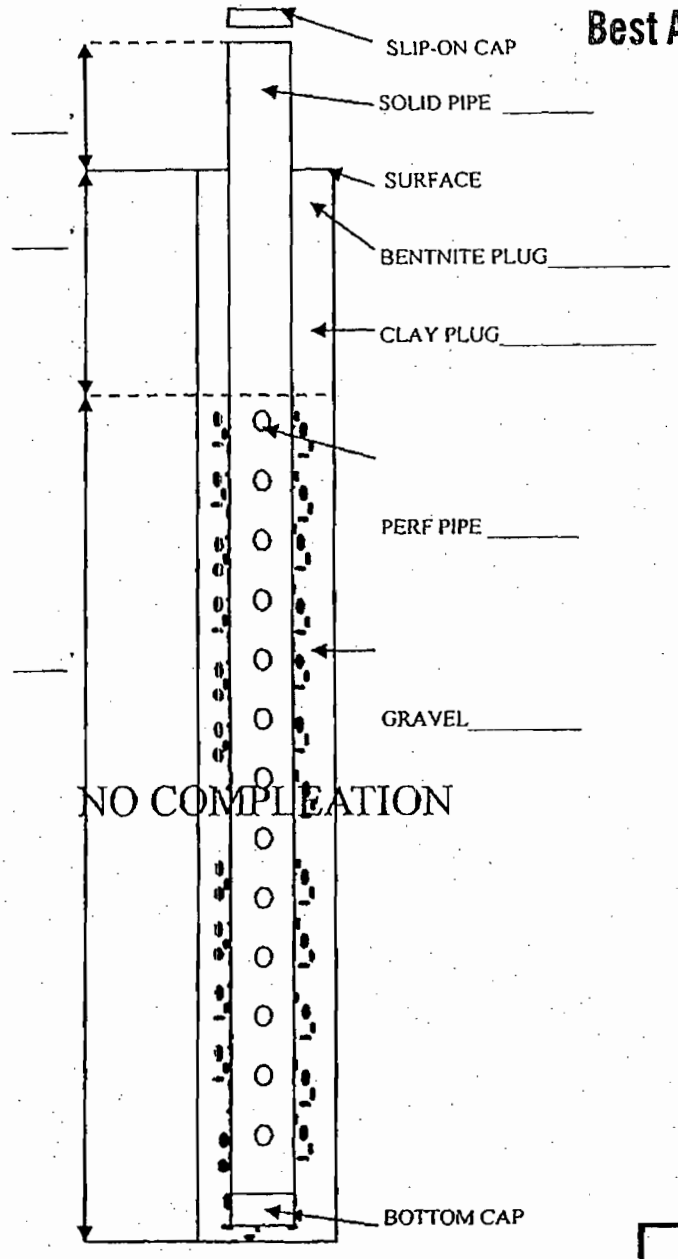
Project Name: Orange County

Well Number: GW-132

Date: WED. 6/11/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	51 FT.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER / SAND	NONE	DRY
2-20	CABLE / STEEL	SLIGHT	8
21-30	STEEL PLATE	↓	8
31-40	CONCRETE	↓	9
41-50	REBAR / CONCRETE	↓	9
51-60	SILK CARPET / TILES	↓	9
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

BEGIN DRILLING AT GW-132 TO A DEPTH OF 51 FT AS ROCK IS APPROVED. ALSO WELL GW-131 IS O.K.'D TO DRILL AS WELL. T.D. FOR GW-131 IS 52 FT. THEN DRILL GW-133 TO A TOTAL DEPTH OF 50 FT. LASTLY DRILL AT LOCATION GW-134. TOTAL DEPTH IS 34 FT. DECON MACHINE & MOVE TO BOTTOM OF HILL. GET READY FOR TRANSPORT. DEPART SITE.

Gatwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

NAME & TITLE

QUALITY DRILLING SERVICE DATE

BILL BRILEY - SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 6/11/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

6J-133 WELL NUMBER OR NAME

50' LINEAR FEET OF DRILLING

50' LINEAR FEET OF COMPLETION

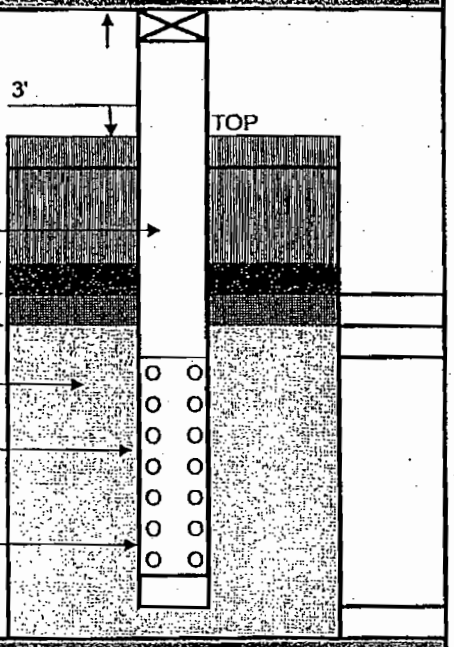
0' LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a
Length of Solid	26'
Backfill Material	16'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	30'
Length of Perf. Pipe	28'
Style of Pipe	SCH 80 PVC
Bottom of bore	50'
Bore diameter	10"

Well Boring log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1.	0
8:00	↓	↓	↓
9:00	↓	↓	↓
10:00	↓	↓	↓
11:00	↓	↓	↓
12:00	↓	↓	↓
1:00	↓	↓	↓
2:00	↓	↓	↓
3:00	↓	↓	↓
4:00	↓	↓	↓
5:00	↓	↓	↓
6:00	↓	↓	↓

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan Engineer.

NAME & TITLE

Dennis Adams

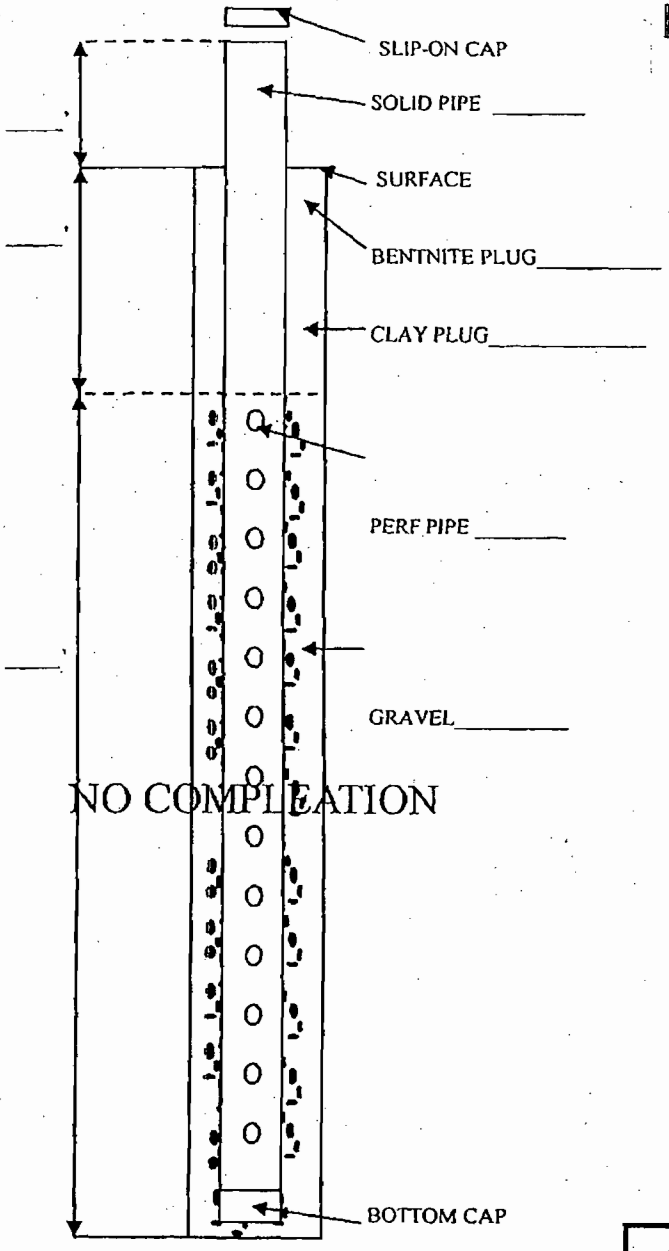
SCS SITE SUPERINTENDENT DATE

QUALITY DRILLING SERVICE

Project Name: Orange County
Well Number: GW-133
Date: WED. 6/11/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	50ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/Cover	NONE	DRY
2-20	FLY ASH/SAND	SLIGHT	9
21-30	SAND/WOOD	↓	10
31-40	WOOD/ST. PLATE	↓	10
41-50	I-BEAM/REBAR	↓	↓ 100
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-133
50 FT.

Satiswardhan 07/24/08.
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Joshua S. [illegible] 6/11/08
QUALITY DRILLING SERVICE DATE

GAS EXTRACTION WELL LOG

DATE: 6/11/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-134 WELL NUMBER OR NAME

34' LINEAR FEET OF DRILLING

34' LINEAR FEET OF COMPLETION

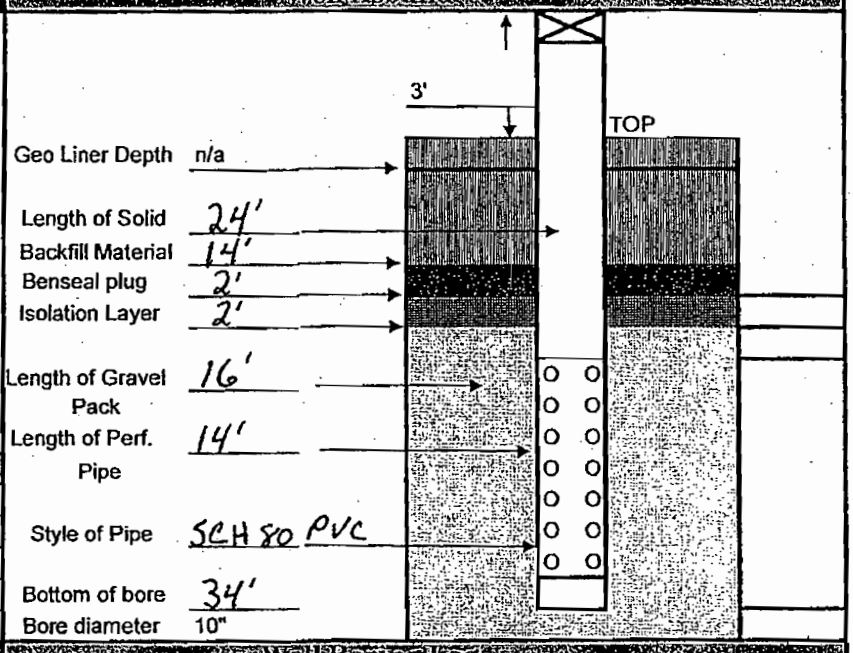
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth: n/a

Length of Solid: 24'

Backfill Material: 14'

Benseal plug: 2'

Isolation Layer: 2'

Length of Gravel Pack: 16'

Length of Perf. Pipe: 14'

Style of Pipe: SCH 80 PVC

Bottom of bore: 34'

Bore diameter: 10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	1	0
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00	↓	↓	↓
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

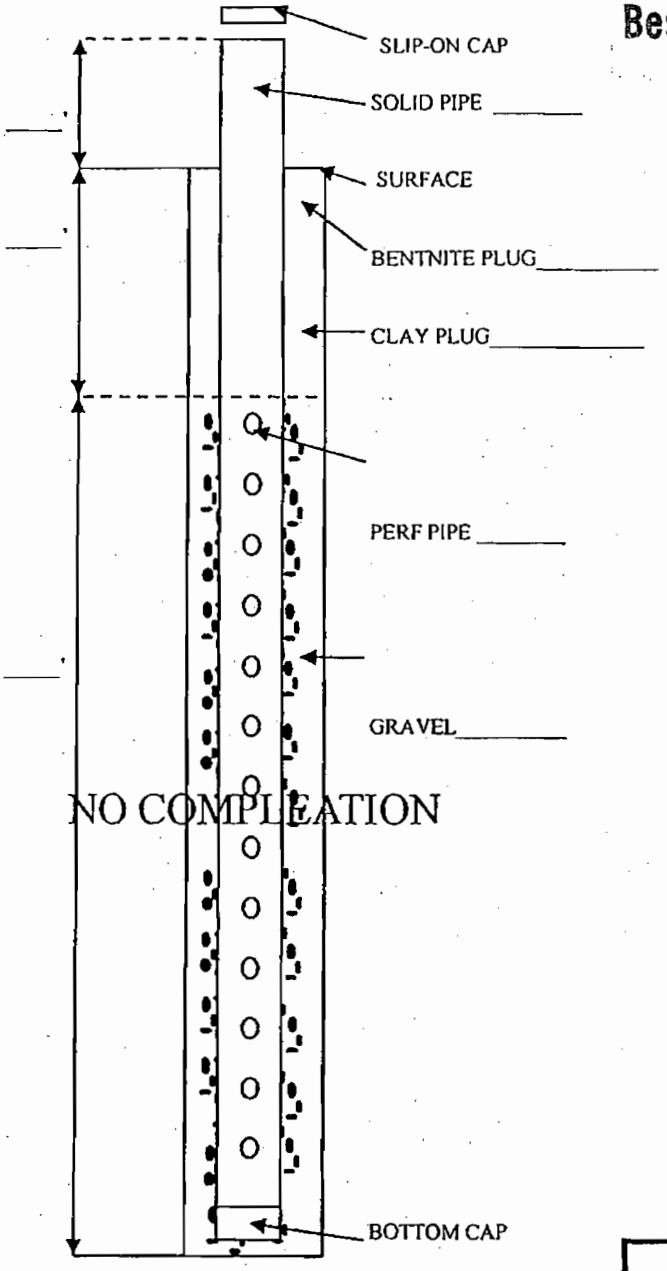
SCS SITE SUPERINTENDENT DATE

Well Number: GW-134

Date: WED. 6/11/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	34 ft.	WEATHER	CLEAR
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/FLYASH	NONE	DRY
2-20	FLYASH/STEEL	SLIGHT	8[illegible]°
21-30	CABLE/WIRE	↓	87°
31-40	STEEL/SAND	↓	↓ 94°
41-50			
51-60			
61-70			
71-80			
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-134
34 ft.

Jatwardhan 07/24/08.

CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE

BILL BRILEY — SITE SUPERVISOR

Best Available Copy

GAS EXTRACTION WELL LOG

DATE: 5/29/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-135 WELL NUMBER OR NAME

82' LINEAR FEET OF DRILLING

82' LINEAR FEET OF COMPLETION

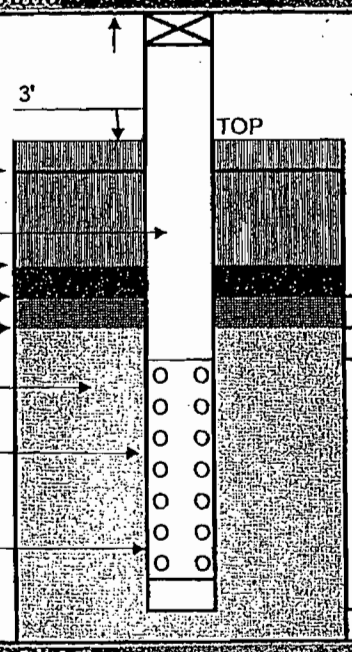
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well As-build



Geo Liner Depth n/a 0

Length of Solid 24'

Backfill Material 14'

Benseal plug 2'

Isolation Layer 2'

Length of Gravel Pack 64'

Length of Perf. Pipe 62'

Style of Pipe SCH 80 PVC.

Bottom of bore 82'

Bore diameter ~~10"~~ 36" GP

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	8.	0
8:00	20.8	8.	0
9:00	20.8	8.	0
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

SCS SITE SUPERINTENDENT DATE

SHOP DRAWING REVIEW

Project: Class III Cell 1 LFG Exp. Client: Orange County

The review of shop drawings by S2L, Inc. or S2L, Inc.'s subcontractor does not relieve the General Contractor of its responsibility to comply with the construction documents. S2L's review of drawings, data, and samples shall cover only general conformity to the construction documents, external connections, and dimensions which affect the installation. S2L's review and exceptions, if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, sample, or item shown.

☐ Reviewed, No Comments ☐ Rejected, Revise and Resubmit

☒ Reviewed, Comments As Noted ☐ Not Reviewed

Date 07/24/08 By: Satwardhan

Date By:

Date 8/8/08 Proj. Mgr. B.L. Mackay

GAS EXTRACTION WELL LOG

DATE: 6/1/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-136 WELL NUMBER OR NAME

75' LINEAR FEET OF DRILLING

75' LINEAR FEET OF COMPLETION

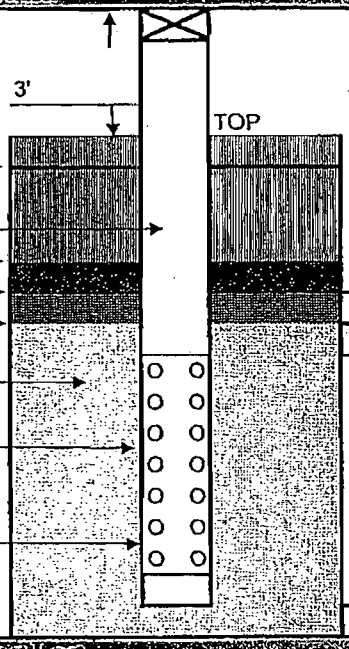
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	57'
Length of Perf. Pipe	55'
Style of Pipe	SCH80 PVC
Bottom of bore	75'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	0	0
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan Engineer

NAME & TITLE

Dennis Adams

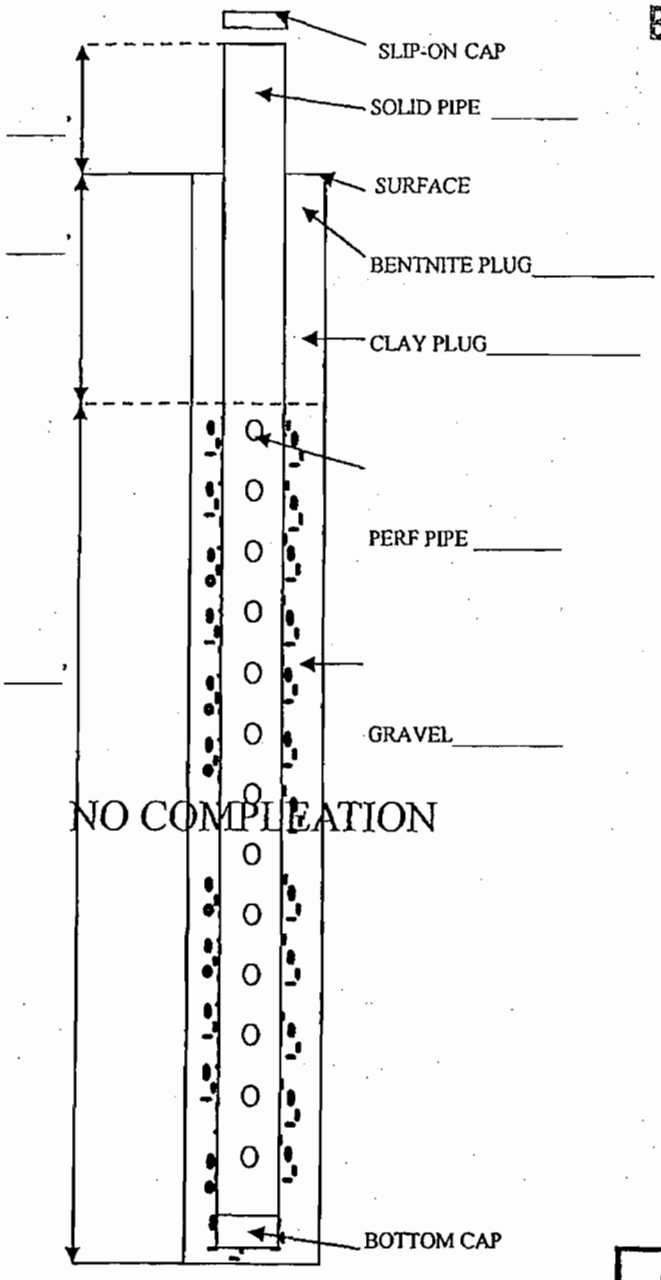
SCS SITE SUPERINTENDENT DATE

Well Number: GW-135

Date: THUR 5/29

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	82 ft	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE	
0-2	COVER/SAND	NONE	DRY	
2-20	DIRT/STEEL	SLIGHT		112°
21-30	SAND/WOOD			116°
31-40	SAND/ST. CABLE			114°
41-50	WOOD/REBAR	MODERATE		111°
51-60	SAND/CARPET			113°
61-70	SAND/SAWDUST			107°
71-80	WOOD/TIRE			110°
81-90	SAND/WOOD/STEEL			
91-100				
101-110				
111-120				
121-130				
131-140				

COMMENTS

ARRIVE AT SITE + HAVE SAFETY MEETING WITH SCS. BEGIN DRILLING AT GW-135 FOR A TOTAL DEPTH OF 82 ft. SET PIPE, SCS DOES THE COMPLETION. MOVE RIG TO WELL # GW-140. SET UP + BEGIN DRILLING. REACH 26 ft. AND HAVE TO STOP FOR THE DAY AS SITE CLOSES AT 5:30. FINISH DRILLING IN THE MORNING. DEPART SITE.

Jatwardhan 07/24/08

CLIENT REPRESENTATIVE NAME & TITLE — DATE

Arthur D. Engh 5/29/08

QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 6/1/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-137 WELL NUMBER OR NAME

88' LINEAR FEET OF DRILLING

88' LINEAR FEET OF COMPLETION

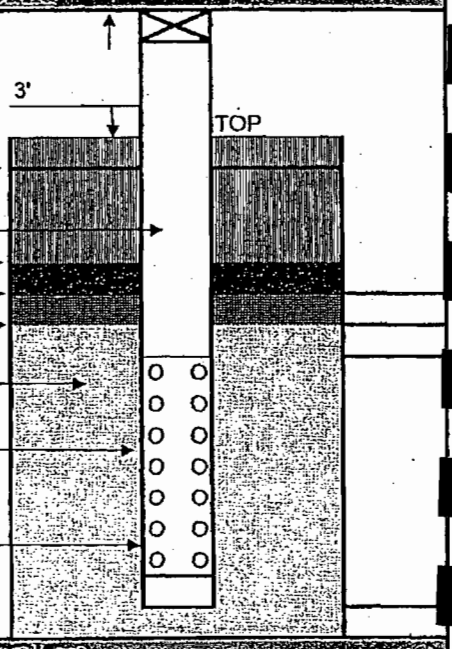
-0- LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES: Hit Something Hard, Set Well at 88' Instead of 93'

Well Asbuild



Geo Liner Depth	n/a	-0-
Length of Solid		24'
Backfill Material		14'
Benseal plug		2'
Isolation Layer		2'
Length of Gravel Pack		70'
Length of Perf. Pipe		68'
Style of Pipe		SCH 80 PVC
Bottom of bore		88'
Bore diameter		10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	0.	-0-
8:00	↓	↓	↓
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00	↓	↓	
5:00			↓
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

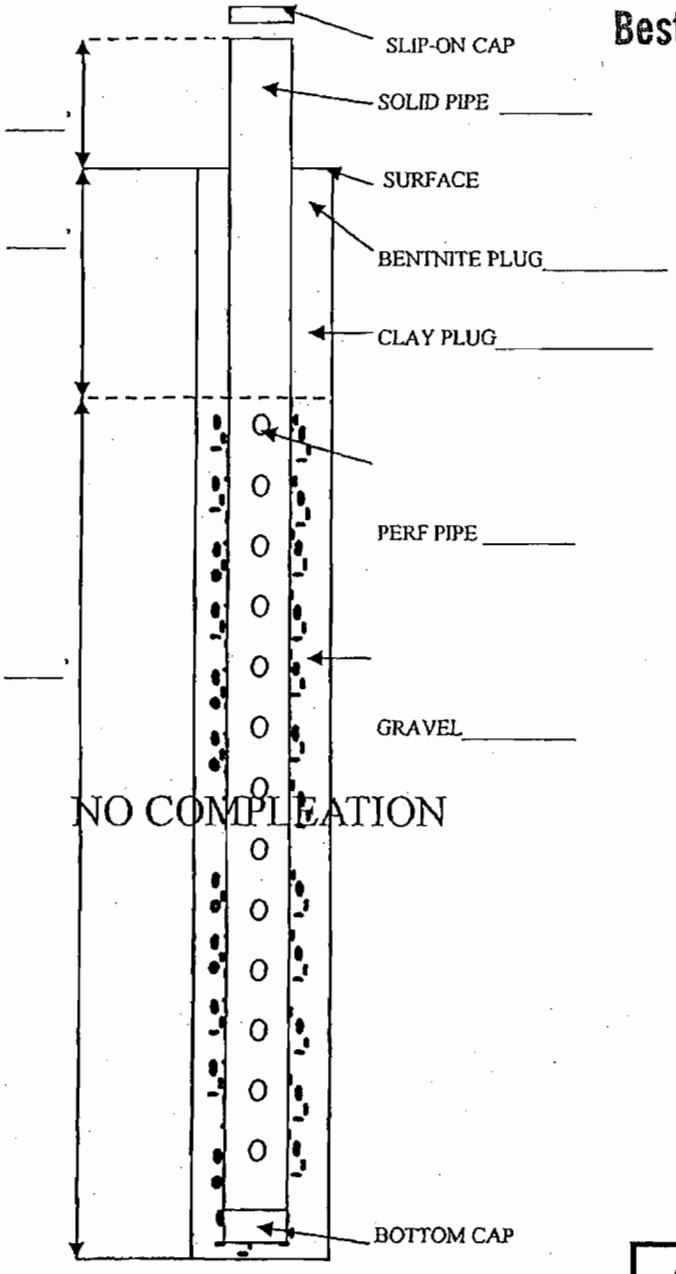
SCS SITE SUPERINTENDENT DATE

Well Number: GW-136

Date: SUN. 6/1/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	75 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC.
PERF.		& TYPE	SCH. 80.

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	MULCH/COVER	NONE	DRY
2-20	MULCH/SAND	SLIGHT	98°
21-30	STEEL PIPE		97°
31-40	CARPET/SAND		101°
41-50	SAND/PAPER		107
51-60	SAND/PHONE BOOKS	NONE	95°
61-70	CONCRETE/STEEL	MOD-SLIGHT	108
71-80	CARPET/SAND	MODERATE	112
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

ARRIVE AT SITE AND FINISH DRILLING GW-137 FROM YESTERDAY'S DEPTH OF 53'. REACH AN OBSTRUCTION AT 88' AND SET WELL. DRILL AT GW-136 TO 75 FT. SET PIPE AND MOVE TO GW-123. DRILL TO APPROX. 22 FT. BEFORE STOPPING FOR THE NIGHT WILL FINISH TOMORROW. DEPART FOR THE NIGHT.

Satwardhan 07/24/08

CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE

GAS EXTRACTION WELL LOG

DATE: 5/31/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-138 WELL NUMBER OR NAME

92' LINEAR FEET OF DRILLING

92' LINEAR FEET OF COMPLETION

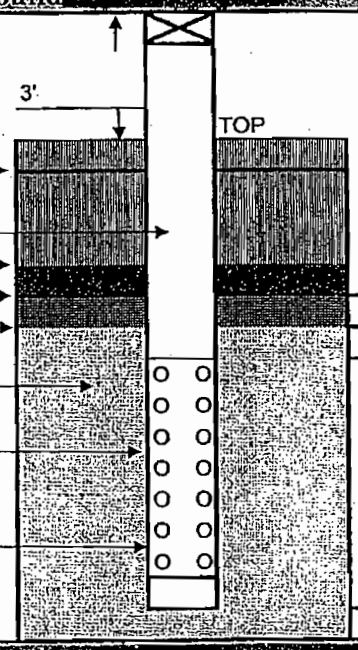
-0- LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a -0-
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	74'
Length of Perf. Pipe	72'
Style of Pipe	Sch 80 PVC
Bottom of bore	92'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.9	0	-0-
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

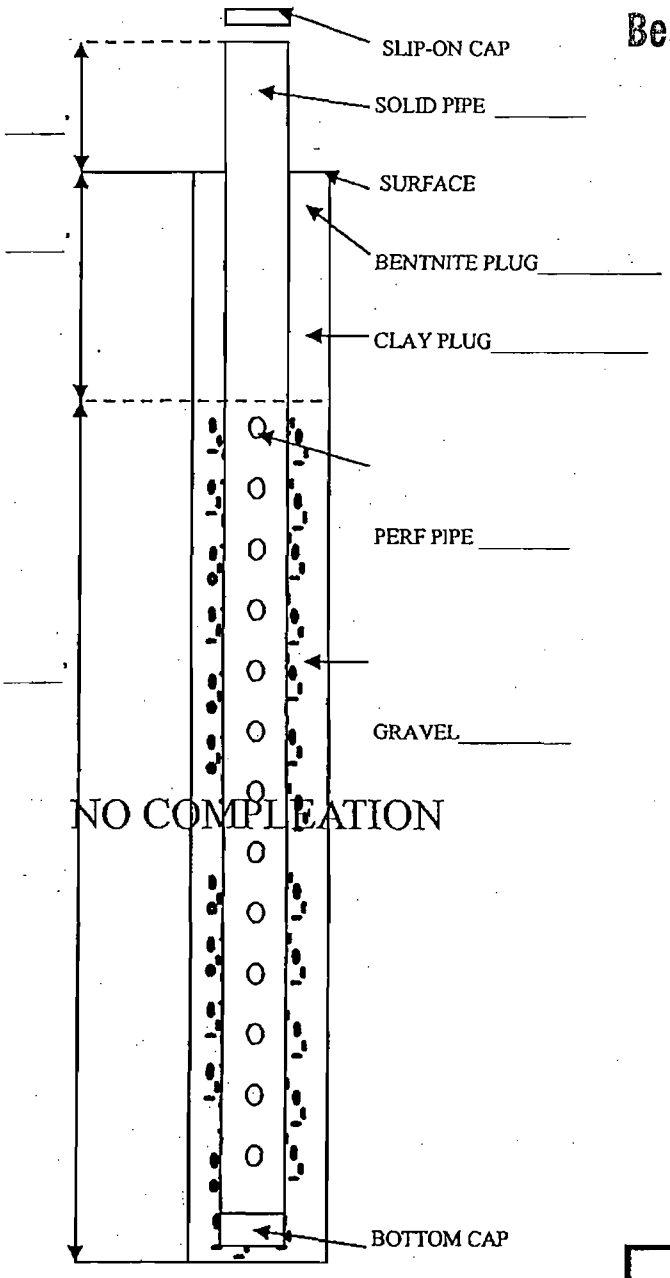
SCS SITE SUPERINTENDENT DATE

Well Number: GW-137

Date: SUN. 6/1/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	88 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	SAND/WOOD	SLIGHT	99°
21-30	" "		102°
31-40	CARPET/SAND		104°
41-50	CONCRETE/REBAR		103°
51-60	CONCRETE/SAND		107°
61-70	I-BEAM/TIRE		111°
71-80	C&D/PLASTIC		112°
81-90	CONCRETE/REBAR	↓	↓ 114°
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-137.
HIT OBSTRUCTION AT 88 ft. (ORIGINAL DEPTH 93')
O.C. DECIDES TO SET PIPE AT THIS DEPTH.

Gatuwardhan 07/24/08'

CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE

BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 5/31/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-139 WELL NUMBER OR NAME

71' LINEAR FEET OF DRILLING

71' LINEAR FEET OF COMPLETION

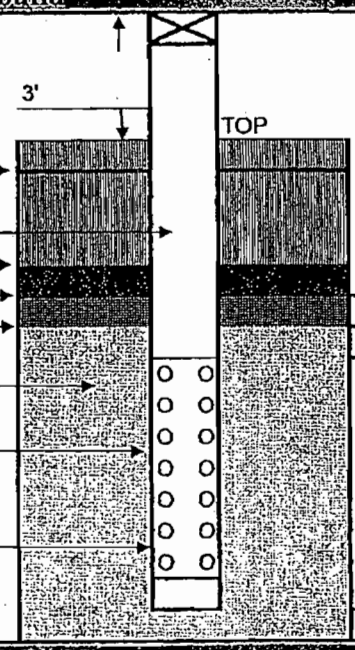
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES: Set well 8' short of initial depth.

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	14.5"
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	18.5"
Length of Perf. Pipe	51'
Style of Pipe	SCH80 PVC
Bottom of bore	71'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	0	0
8:00	↓	↓	↓
9:00	↓	↓	↓
10:00	↓	↓	↓
11:00	↓	↓	↓
12:00	↓	↓	↓
1:00	↓	↓	↓
2:00	↓	↓	↓
3:00	↓	↓	↓
4:00	↓	↓	↓
5:00	↓	↓	↓
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer

NAME & TITLE

Dennis Adams

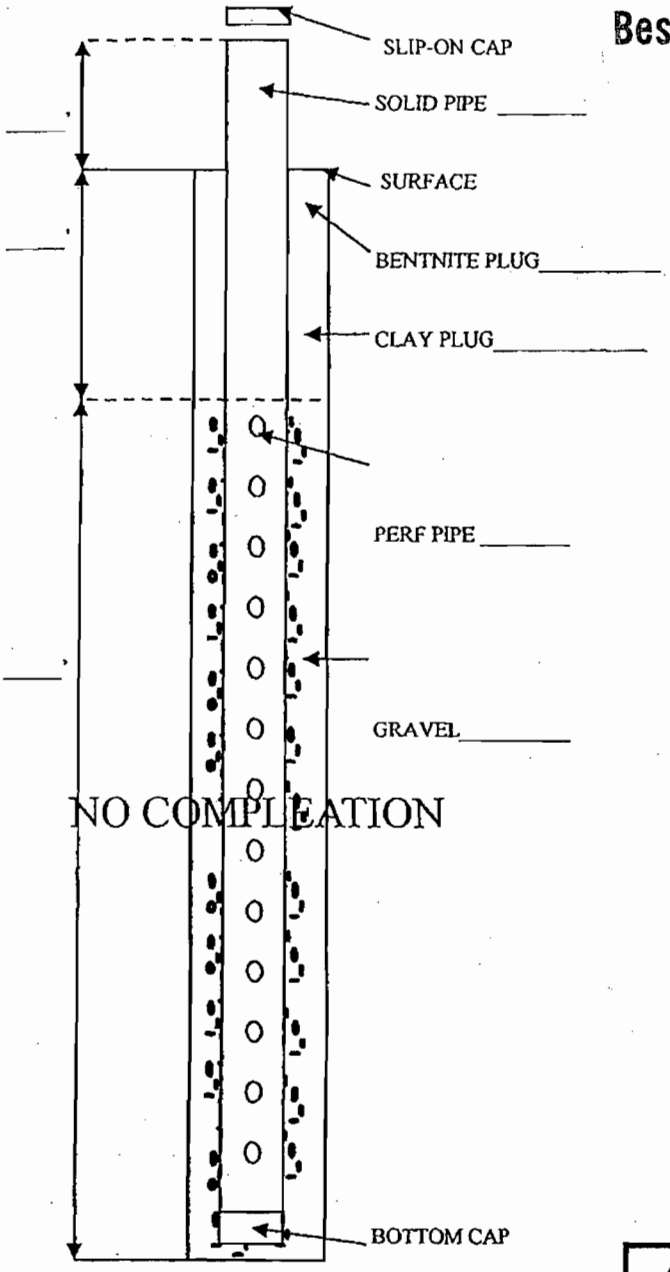
SCS SITE SUPERINTENDENT DATE

DRILLING & COMPLETION LOG

Best Available Copy

Well Number: GW-138

Date: 5/31/08 SAT.



NO COMPLEATION

DRILL	92 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE	
0-2	SAND/MULCH	NONE	DRY	
2-20	MULCH/CABLE	SLIGHT		96°
21-30	CARPET/SAND			104°
31-40	SAND/WOOD			107°
41-50	CONCRETE			111°
51-60	SAND ~~SET~~ 5ft.			113°
61-70	REBAR/CONCRETE			112°
71-80	I-BEAM/WOOD			111°
81-90	SAND/PLASTIC			114°
91-100	SAND/MULCH	↓		117°
101-110				
111-120				
121-130				
131-140				

COMMENTS

HAVE QUALITY TAILGATE SAFETY MEETING. FINISH DRILLING GW-139. SET UP RIG AT ~~GW-137~~ GW-138 AND DRILL TO 92 FT. SET PIPE MOVE TO GW-137 AND DRILL TO 88 FT. (COULD NOT GET 93'- OBSTRUCTION ~~SET PIPE, AND MOVE RIG TO~~ (FINISHED GW-137 ON SUN. 6/1)

Satwardhan 07/24/08

CLIENT REPRESENTATIVE NAME & TITLE — DATE

QUALITY DRILLING SERVICE — DATE

BILL BRILEY — SITE SUPERVISOR

GAS EXTRACTION WELL LOG

DATE: 5/30/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-140 WELL NUMBER OR NAME

89' LINEAR FEET OF DRILLING

89' LINEAR FEET OF COMPLETION

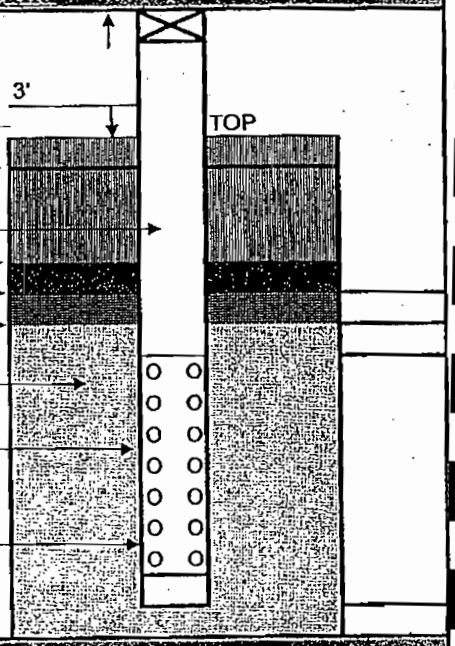
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	14'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	71'
Length of Perf. Pipe	69'
Style of Pipe	SCH80 PVC
Bottom of bore	89'
Bore diameter	10"

Well Boring Log

Time	OXYGEN	H2S	LEL / CO
7:00	20.8	0.	0
8:00		0.	0
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

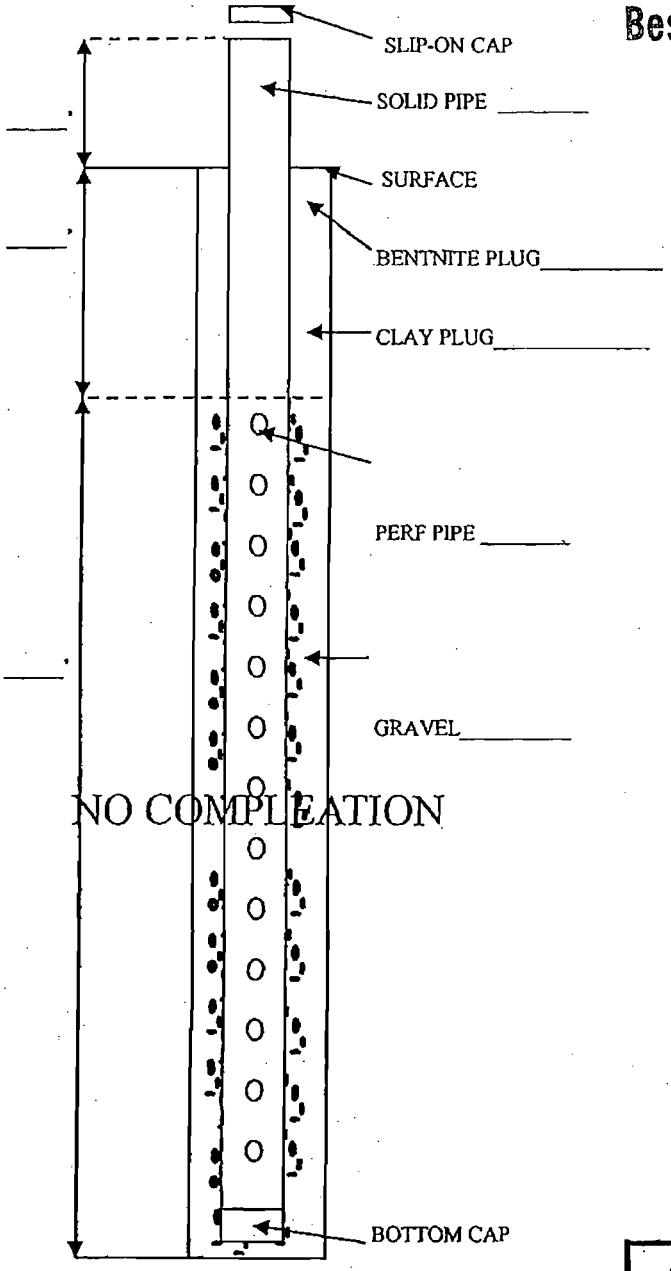
SCS SITE SUPERINTENDENT DATE

Well Number: GW-139

Date: FRI. 5/30/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	7'/A.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC.
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	SAND/MULCH	NONE	DRY
2-20	SAND/WOOD	SLIGHT	101°
21-30	WOOD/I-BEAM		104°
31-40	CONCRETE/REBAR		103°
41-50	TIRE/SAND/WIRE		106°
51-60	CABLE/SAND		102°
61-70	WOOD/SAND		103°
71-80	CONCRETE/REBAR		101°
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR GW-139
T.D. IS 71 FT.
HIT AN OBSTRUCTION AT A DEPTH OF 71 FT.
QC. INSPECTER MAKES CALL TO SET THE PIPE/WELL AT 71 FT.

Jatwardhan 07/24/08
CLIENT REPRESENTATIVE DATE
NAME & TITLE

Arthur D. Cyr 5/30/08
QUALITY DRILLING SERVICE DATE
BILL BAILEY - SITE SUPERVISOR

Best Available Copy

GAS EXTRACTION WELL LOG

DATE: 5/30/08

PROJECT NAME: Orange county Landfill

PROJECT#: .12207037.00

W-141 WELL NUMBER OR NAME

71' LINEAR FEET OF DRILLING

71' LINEAR FEET OF COMPLETION

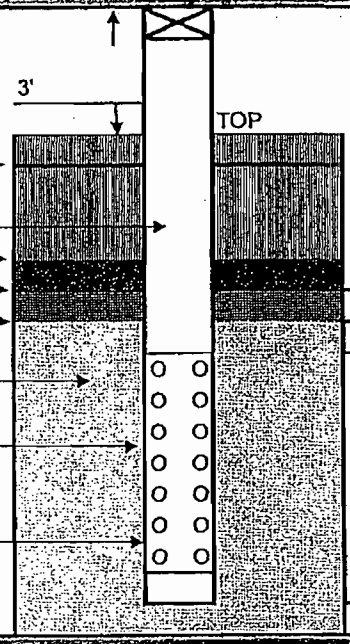
0 LINEAR FEET OF ABANDONMENT

Weather conditions:

Site conditions:

NOTES:

Well Asbuild



Geo Liner Depth	n/a 0
Length of Solid	24'
Backfill Material	13'
Benseal plug	2'
Isolation Layer	2'
Length of Gravel Pack	54'
Length of Perf. Pipe	51'
Style of Pipe	Sch 80 PVC
Bottom of bore	71'
Bore diameter	10"

Well Boring Logs

Time	OXYGEN	H2S	LEL / CO
7:00			
8:00			
9:00			
10:00			
11:00			
12:00			
1:00			
2:00			
3:00			
4:00			
5:00			
6:00			

Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
0-10				
10-20				
20-30				
30-40				
40-50				
50-60				
60-70				
70-80				
80-90				
90-100				
100-110				
110-120				
120-130				
130-140				

Gautam Patwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

Gautam Patwardhan, Engineer.

NAME & TITLE

Dennis Adams

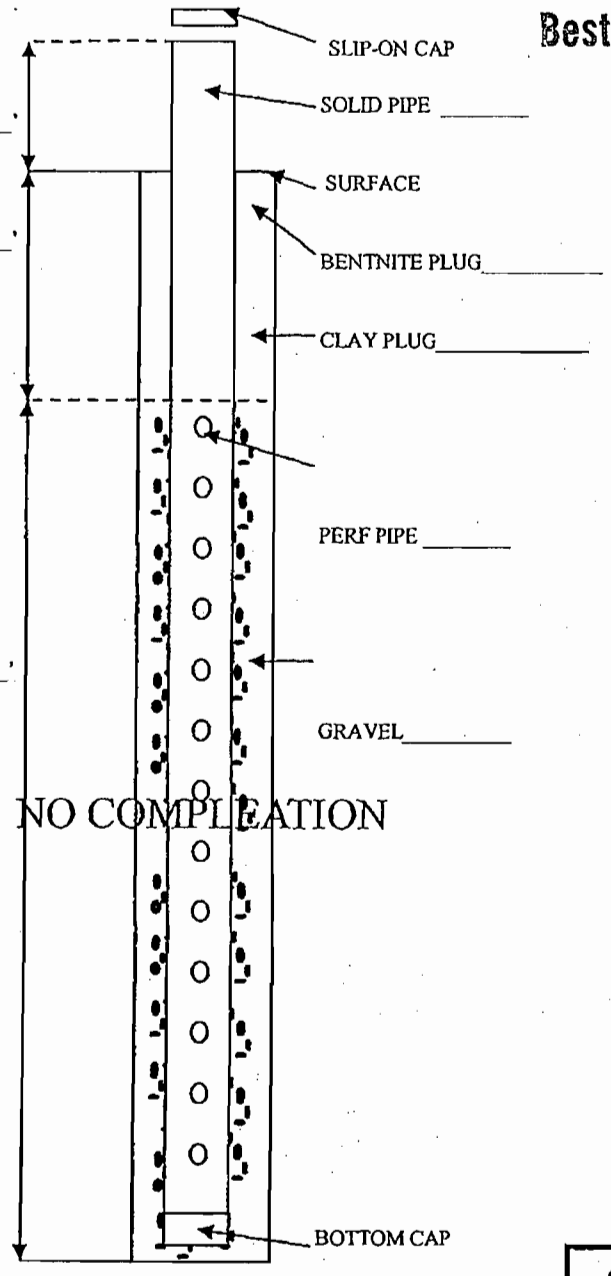
SCS SITE SUPERINTENDENT DATE

Well Number: GW-140

Date: Fri. 5/30/08

DRILLING & COMPLETION LOG

Best Available Copy



NO COMPLEATION

DRILL	89 ft.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	SAND/CONCRETE	SLIGHT	97°
21-30	" "	↓	98°
31-40	CONCRETE/STEEL PIPE	↓	101°
41-50	SAND/CARPET	SLIGHT-MOD	104°
51-60	STEEL/CONCRETE	MODERATE	110°
61-70	WOOD/SAND	↓	113°
71-80	SAND/REBAR	↓	114°
81-90	SAND/WOOD	↓	↓112°
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

WELL LOG FOR
GW-140
89 ft.

Satwardhan 07/24/08.

CLIENT REPRESENTATIVE DATE

NAME & TITLE

Arthur D. Craig 5/30/08

QUALITY DRILLING SERVICE DATE

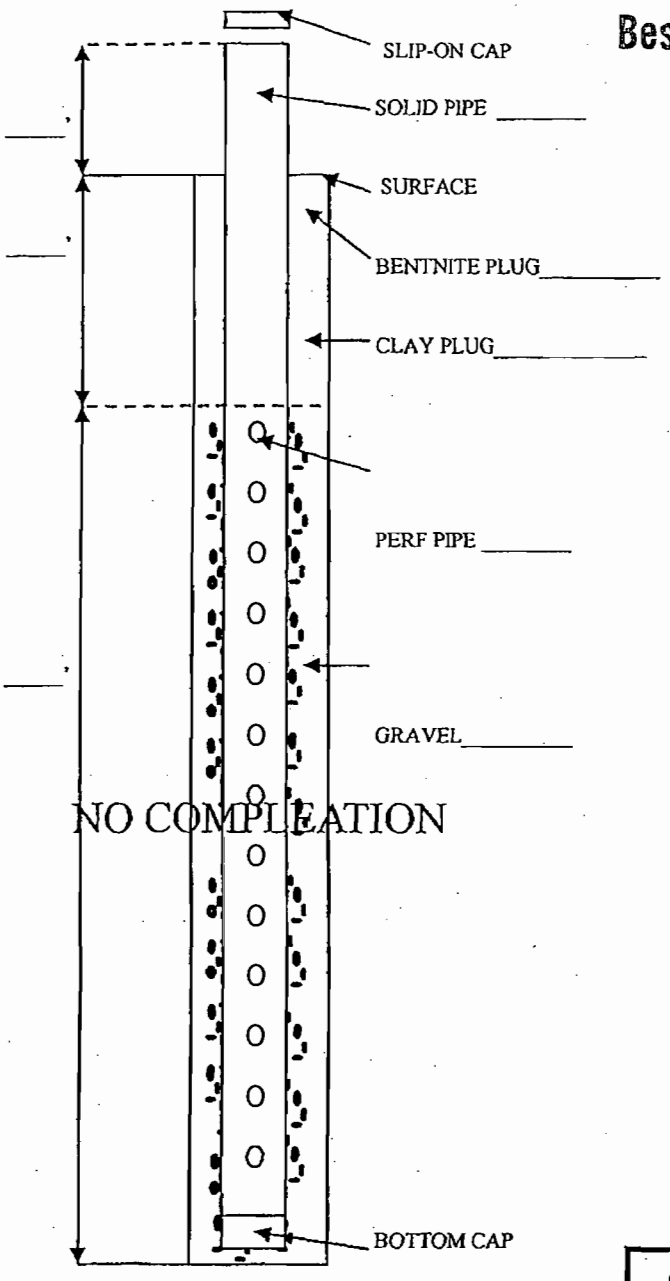
BILL BRILEY - STTE SUPERVISOR

Well Number: GW-141

Date: FRI. 5/30/08

DRILLING & COMPLETION LOG

Best Available Copy



DRILL	71 FT.	WEATHER	CLEAR/HOT
COMP.		START	
ABAN.		STOP	
SOLID		PIPE DIA.	6" PVC
PERF.		& TYPE	SCH. 80

DEPTH	COMPOSITION & TEMPERATURE °	DEGREE OF DECOMPOSITION	AMOUNT OF MOISTURE
0-2	COVER/SAND	NONE	DRY
2-20	CONCRETE/SAND	SLIGHT	95°
21-30	SAND/SAWDUST	↓	108°
31-40	SAND/WOOD	↓	121°
41-50	STEEL/WIRE	MODERATE	130°
51-60	SAND/PAPER	SLIGHT	117°
61-70	SAND/REBAR	MODERATE	120°
71-80	CONCRETE/STEEL	↓	↓ 118°
81-90			
91-100			
101-110			
111-120			
121-130			
131-140			

COMMENTS

ARRIVE AT SITE + DO OUR TAILGATE SAFETY MEETING. RESUME DRILLING AT GW-140 FROM YESTERDAYS DEPTH OF 26 FT. GET TO 89 FT. SET PIPE, MOVE ~~TO~~ GW-141 AND DRILL TO 71 FT. SET PIPE, SCS DOES COMPLETION. BEGIN DRILLING AT GW-139 FOR A DEPTH OF 79 FT. HAVE TO STOP FOR THE DAY AT 63 FT. WHEN SITE CLOSES. FINISH IN THE MORNING. DEPART SITE.

Gatwardhan 07/24/08

CLIENT REPRESENTATIVE DATE

NAME & TITLE

QUALITY DRILLING SERVICE DATE

BILL BRILEY - SITE SUPERVISOR

APPENDIX D

CONSTRUCTION PHOTOGRAPHS

FIGURE 3: Filling the borehole with rock to 1' above the perforated section.

FIGURE 4: Installing the geotextile pad.

FIGURE 1: Drill rig drilling a gas well.

FIGURE 2: Gluing a section of solid pipe to the perforated pipe.

FIGURE 5: Trenching to lay the laterals.

FIGURE 6: Cutting a header to fuse a lateral onto the header pipe.

FIGURE 7: Using electrofusion couplings to fuse a lateral onto the header pipe.

FIGURE 8: Pressure testing a lateral.

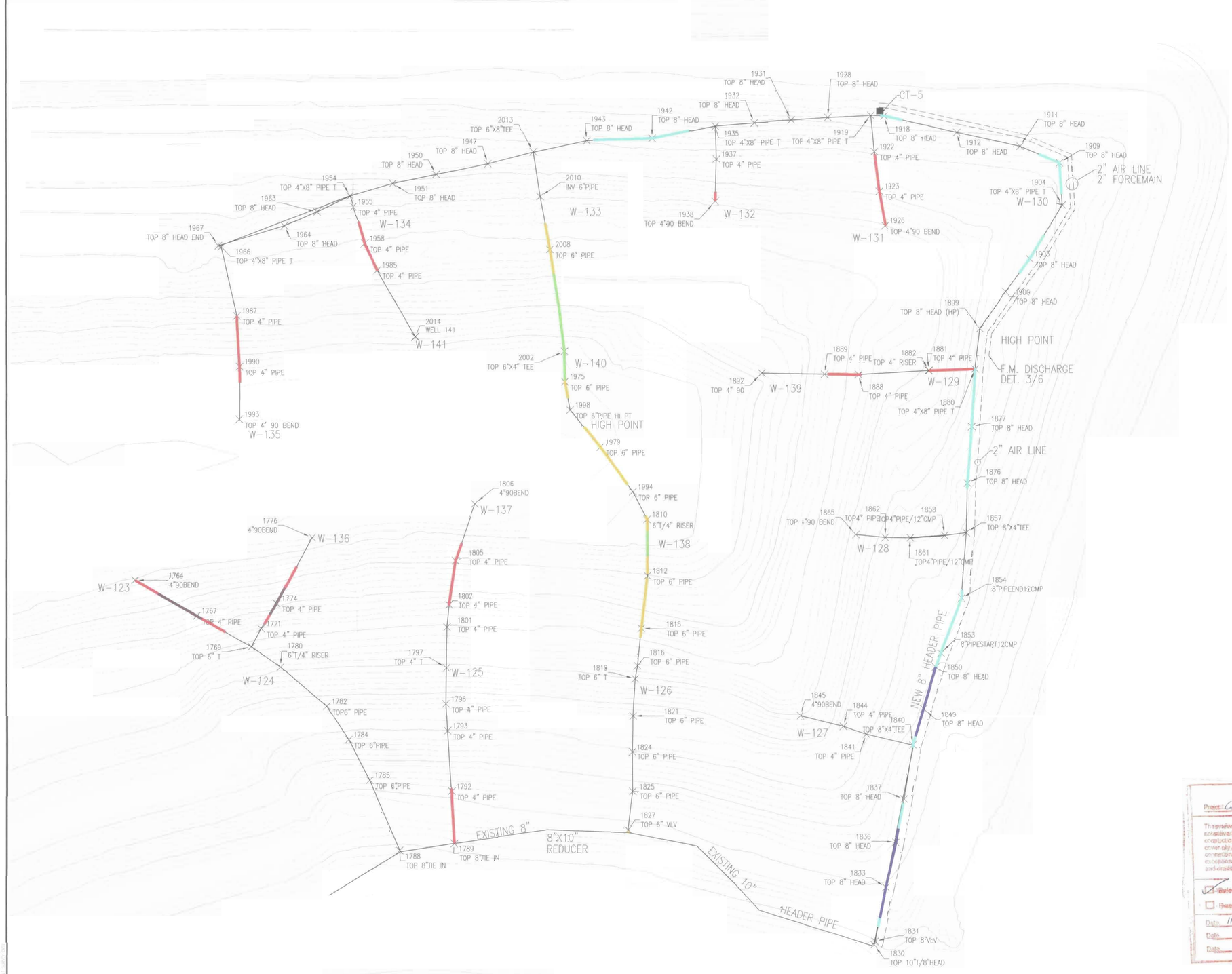
FIGURE 9: Laying CMP under the access road.

FIGURE 10: Fabricating the condensate knockout.

APPENDIX E

RECORD SURVEY

950113 (1)



LEGEND

- 2" AIR LINE & FORCEMAIN
- 4"-8" HEADER/LATERALS LESS THAN 5'
- 4" HEADER/LATERALS - 5'-7'
- 4" HEADER/LATERALS - 7'-10'
- 6" HEADER/LATERALS - 5'-7'
- 6" HEADER/LATERALS - 7'-10'
- 8" HEADER/LATERALS - 5'-7'
- 8" HEADER/LATERALS - 7'-10'
- SELF DRAINING CONDENSATE TRAP

SHOP DRAWING REVIEW

Project: Class III Cell 1 EXP Client: Orange County

The review of shop drawings by S2L, Inc. or S2L, Inc.'s subcontractor does not relieve the General Contractor of its responsibility to comply with the construction documents. S2L's review of drawings, data, and samples shall cover only general conformity to the construction documents, minimal connections, and dimensions which affect the installation. S2L's review and exceptions, if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, sample, or item shown.

☒ Reviewed, No Comments ☐ Rejected, Revise and Resubmit

☐ Reviewed, Comments As Noted ☐ Not Reviewed

Date 11/21/08 By

Date By

Date Proj. Mgr.

DRAFT

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: CLASS III CELL 1 AS-BUILT SURVEY - EAST SIDE

PROJECT TITLE: LANDFILL GAS MANAGEMENT EXPANSION SYSTEM

CLIENT: ORANGE COUNTY LANDFILL

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
1901 CENTRAL DRIVE, SUITE 550, BEDFORD, TX 76021
PH (817) 571-2288 FAX NO. (817) 571-2188

PROJ. NO. | DWN. BY: JLJ | CHK. BY: RB | QA RVW BY: | APP. BY:

DSN. BY:

CADD FILE: AS-BUILT SURVEY EAST

DATE: 090308

SCALE: AS SHOWN

DRAWING NO. 1

LEGEND

- 2" AIR LINE & FORCEMAIN
- 4"-8" HEADER/LATERALS LESS THAN 5'
- 4" HEADER/LATERALS - 5'-7'
- 4" HEADER/LATERALS - 7'-10'
- 6" HEADER/LATERALS - 5'-7'
- 6" HEADER/LATERALS - 7'-10'
- 8" HEADER/LATERALS - 5'-7'
- 8" HEADER/LATERALS - 7'-10'
- SELF DRAINING CONDENSATE TRAP

SHOP DRAWING REVIEW

Project: Class III Cell I CFG Exp. Client: Orange County

The review of shop drawings by SCS, Inc. or SCS, Inc.'s subcontractor does not relieve the General Contractor of its responsibility to comply with the construction documents. SCS's review of drawings, data, and samples shall cover only general conformity to the construction documents. SCS's review and connections, and dimensions which affect the installation. Quantities, exceptions, if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, sample, or item shown.

☐ Reviewed, No Comments ☐ Rejected, Revise and Resubmit
☑ Reviewed, Comments As Noted ☐ Received

Date: 11/21/08 By: [signature]
Date: By:
Date: Proj. Mgr.

W-102 to W-119 is a 4" pipe.

DRAFT

REV | DATE | DESCRIPTION | BY

DRAWING TITLE: CLASS III CELL I AS-BUILT SURVEY - WEST SIDE

PROJECT TITLE: LANDFILL GAS MANAGEMENT SYSTEM EXPANSION SYSTEM

CLIENT: ORANGE COUNTY LANDFILL

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
1901 CENTRAL DRIVE, SUITE 550, BEDFORD, TX 76021
PH (817) 571-2288 FAX NO. (817) 571-2188

PROJ. NO. | DSN. BY: | DWN. BY: | CHK. BY: JLJ | APP. BY: | Q/A RVW BY:

CADD FILE: AS-BUILT SURVEY WEST

DATE: 10/2008

SCALE: AS SHOWN

DRAWING NO. 1