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	DIN

Permit No. 11-07

*9/26/12 @*

## Buncombe County, North Carolina Solid Waste Management Facility Cell 6 Gas Collection System Construction Quality Assurance Report



August 2006



# Report



5400 Glenwood Avenue, Suite 300  
Raleigh, North Carolina 27612  
tel: 919 787-5620  
fax: 919 781-5730

DWM-SWS  
Approved 09/12/06  
JCC

August 17, 2006

Permit No. 11-07

Mr. Jim Coffey  
Regional Engineer  
Solid Waste Section  
Division of Waste Management  
2090 US Highway 70  
Swannanoa, NC 28778

Subject: Buncombe County, North Carolina  
Buncombe County Solid Waste Management Facility  
Cell 6 Gas Collection System Installation Project  
Construction Quality Assurance Report Documentation  
Permit No. 11-07

Dear Jim:

On behalf of Buncombe County (County), Camp Dresser & McKee (CDM) is pleased to submit three (3) copies of the Construction Quality Assurance (CQA) report documentation for the aforementioned project for your review. The installation of the gas collection system was approved by the Solid Waste Section (SWS) in a letter dated June 2, 2006 (see Appendix A). The letter required the submission of CQA documentation, which is the intent of this report.

Please accept this letter as the certification statement required by Rule .1624(b)(16)(C). The testing results and other documentation presented in the attached CQA document have been either reviewed by me or under my direct supervision, and they accurately reflect the installation and testing that was observed by CDM. To the best of my knowledge, information, and belief, the Cell 6 gas collection system installation was completed in general accordance with:

- The approved CQA Plan;
- The conditions of the Permit to Construct;
- The requirements of Rule .1624; and
- Acceptable engineering practices.



Mr. Jim Coffey  
August 17, 2006  
Page 2

The following documentation is included:

- Appendix A: June 2, 2006 SWS Approval Letter
- Appendix B: Contractor submittals/shop drawings
  - Excavator size and ground pressure
  - Solid and perforated HDPE pipe
  - Pipe welder's certification
  - Wellhead
  - Final as-built drawings
- Appendix C: CDM's daily reports
- Appendix D: Construction photographs

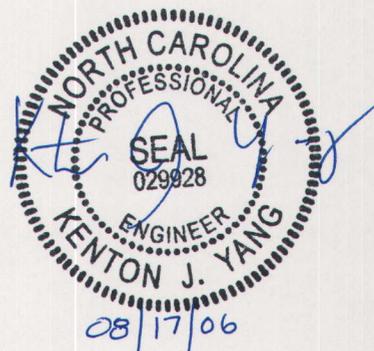
Please do not hesitate to contact me at (919) 787-5620 if you have any questions or if there is anything I can do to facilitate the review and approval of this request.

Very truly yours,

Kenton J. Yang, P.E.  
Camp Dresser & McKee

attachments: as noted

xc: E. Mussler, NCDENR (SWS)  
B. Hunter, BCGSD  
J. Mears, BCGSD  
D. Ballew, BCGSD  
J. Wiseman, CDM  
C. Gabel, CDM  
M. Brinchek, CDM





NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor  
William G. Ross Jr., Secretary

June 2, 2006

Bob Hunter, Director  
Buncombe County Solid Waste Services  
2229 Riverside Drive  
Asheville, North Carolina 28801

Re: Buncombe County Municipal Solid Waste Landfill, Permit Number 11-07  
Modification to the Permit to Construct, Cell 6

Mr. Hunter:

The Solid Waste Section (Section) has reviewed the request, submitted on Buncombe County's behalf by Camp Dresser & McKee (CDM), to modify the Permit to Construct for Cell 6 of the referenced facility. *The Construction Quality Assurance Plan for the Installation of the Gas Collection System* prepared by CDM dated May 25, 2006, describes the installation procedures, in particular the construction quality assurance, to install an 8-inch gas header and collection pipes in the existing protective cover of Cell 6.

By this letter, the Section modifies the Permit to Construct to allow the proposed installation. Upon review and approval of the construction quality assurance documentation, the Section will modify the Permit to Operate to include this modification.

If you have any questions, please feel free to contact Jim Coffey at 828-296-4703 at the Asheville Regional Office.

Sincerely,

Edward F. Mussler III  
CN = Edward F. Mussler III, C = US,  
O = Division of Waste Management,  
OU = Solid Waste Section  
I have reviewed this document and I  
am approving this document  
2006.06.02 09:17:56 -04'00'

Edward F. Mussler, III, P.E.  
Permitting Branch Supervisor  
Solid Waste Section

cc: James C. Coffey - DWM  
Al Hetzell - DWM  
Kenton Yang, PE- CDM

1646 Mail Service Center, Raleigh, North Carolina 27699-1646  
Phone 919-508-8400 \ FAX 919-733-4810 \ Internet <http://wastenotnc.org>

**Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Contractor Submittals/Shop Drawings**

**Excavator Size and Ground Pressure**

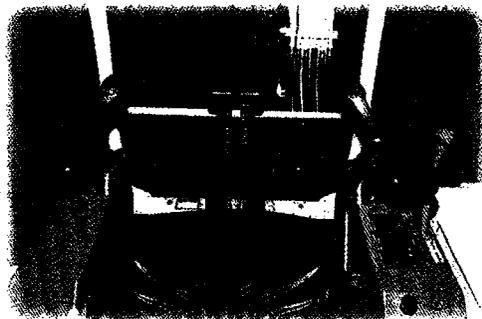
# TAKEUCHI® TB125

## Compact Excavator

Tilt-Up Operators Platform

### standard features

- Tilt-up operators platform
- Electrohydraulic push-button control of auxiliary hydraulics
- Quick change control pattern selector valve
- Emergency shutdown/return-to-idle system
- Electronic engine monitoring system
- Cast iron wrap-around protective counterweight
- Automatic fuel bleed system
- Variable displacement piston pumps
- One touch engine decelerator
- Travel alarm
- Safety locked lever for travel and operating controls
- Remotes slow lubrication system
- Low and high range travel speeds
- Two-way auxiliary hydraulics plumbed to dumper arm
- Double flanged track rollers
- Spring applied, hydraulically released disc type parking brakes
- Precise response, proportional main control valves
- Simultaneous operation of cab swing and two digging functions with no reduction in speed
- Straight travel with simultaneous operation of digging and swing functions
- Cushioned main boom, arm and swing cylinders
- Hydraulic oil cooler
- Protective routing of bucket and arm cylinder hydraulic hoses
- Double flanged track rollers
- Adjustable pilot-operated hydraulic controls with direct
- Main boom cylinder guard
- Low noise level and EPA exhaust emission compliant engine
- U-ring and grease seals installed on bucket pins
- TPPS/TPS a-post canopy
- Six-way adjustable suspension seat with retractable seat belt
- Variable protected lockable fuel tank and engine compartment
- Lockable operator's manual and storage compartments
- Two front-mounted work lights
- Optional TPPS/TPS cab
- Optional steel tracks



Conveniently located operating controls



### ► dimensions & weight

Operating Weight (lbs.)	8,181
Length (transport)	14' 10"
Width	4' 9"
Height	6' 0"
Ground Clearance	11.8"
Min. Front Swing Radius (50° boom swing)	2' 0"
Tail Swing Radius	4' 3"
Dumper Blade (w/ ch)	4' 9" / 14"

### ► engine

Make/Model	Yanmar: 2TN62A-7B
Horsepower / RPM (SAE 1.945 gross)	23.3 / 2,300
Maximum Torque (ft.-lb. / kNm)	62.1 / 84.0
Cylinders / BHP	3 / 31.7
Fuel Consumption (65% of full load) gal. / hr.	3.6
Electrical System (volt / amp)	12 / 40

### ► swing system

Independent Boom Swing Angle (°/R)	88 / 88
Swing Speed (rpm)	0.8
Swing Motor	axial piston
Swing Reducor	planetary
Swing Brake	disc

### ► operating information

Max. Dig Depth	9' 6"
Max. Dump Height	10' 5"
Max. Reach at Ground Level	13' 9"
Max. Vertical Dig Depth	5' 4"
Max. Dig Depth w/ 2h. Full Boom	9' 0"
Max. Dig Depth w/ 2h. Full Bottom	7' 11"
Max. Bucket Dig Force (lbs.)	9,350
Max. Arm Dig Force (lbs.)	2,848

### ► lift capacities (lbs.) at 8' 4" radius

	over front (boom down)	at the end
1.5h	1,500	1,500
ground level	5,181	3,200
1.5h	1,500	1,500

### ► undercarriage

Track Rollers	with cushion
Track Guide	plastic
Track Tension (lbs.)	3,000
Track Brake	disc
Track Rollers (per side)	4
Idler Roller (per side)	1
Track Type	rubber
Track Width	12"
Ground Contact Length	4' 0"
Ground Pressure (psi)	1.1
Travel Speed (mph)	1.7 / 3.4
Maximum Gradeability	30°

### ► hydraulic system

System Operating Pressure (psi)	3,000
Pump Type	2 Phase / 2.5cm <sup>3</sup>
Hydraulic Flow (gpm)	17.5 / 2.0 / 2.0 / 2.0
Quality Filter (mm)	100

### ► capacities

Hydraulic System (gpm)	17.5
Fuel Tank (gal.)	10.4
Engine Lubrication (oil cooling system) (l)	4.4
Final Drive (l) (each)	2.5

### ► bucket

Width	3' 0"
Capacity (Material) (cu. yd.)	2.00
Capacity (Material) (cu. m)	1.50

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In accordance with our established policy of continued improvement, specifications and features are subject to change without notice. Pictures of excavator may show other than our standard equipment.

**Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Contractor Submittals/Shop Drawings**

**Solid and Perforated HDPE Pipe**

For more information and technical assistance contact:

Performance Pipe, a division of  
Chevron Phillips Chemical Company LP  
P.O. Box 269006  
Plano, TX 75026-9006  
800.527.0662



## DriscoPlex® PE 3408 HDPE Piping Systems

### Municipal and Industrial Applications and Standards

Typical Markets for Pipe and Fittings	DriscoPlex® Series Pipe	Typical Features
FMA Approved Underground Fire Main	DriscoPlex® 1500 Pipe	2, 8, 10
		2, 8, 17
	DriscoPlex® 1600 Pipe	6, 10, 18
Mining	DriscoPlex® 1700 Pipe	6, 17, 18
Perforated Pipe	DriscoPlex® 1900 Pipe	1, 3
Water Distribution	DriscoPlex® 4000 Pipe	1, 4
Municipal & Industrial, Water Distribution	DriscoPlex® 4100 Pipe	5, 6, 7
Sanitary Sewer & Trenchless Rehabilitation	DriscoPlex® 4200 Pipe	1, 8, 19, 20
	DriscoPlex® 4300 Pipe	8, 9
Treated/Reclaimed Water	DriscoPlex® 4400 Pipe	5, 6, 9
	DriscoPlex® 4500 Pipe	8, 11
	DriscoPlex® 4600 Pipe	5, 6, 11
Industrial Sewer, Municipal Sewer, Sliplining & Trenchless Rehabilitation	DriscoPlex® 4700 Pipe	1, 12
	DriscoPlex® 1200 Pipe	5, 6, 12, 15
	DriscoPlex® 1400 Pipe	1, 13
Dual Containment	DriscoPlex® 2400 Pipe	5, 13
Industrial Specialty	DriscoPlex® 1000 Pipe	1, 14
		1, 16

**NOTICE.** Capabilities vary from manufacturing plant to manufacturing plant. Contact Performance Pipe to determine the availability of specific products and the availability of particular stripe or shell colors, striping patterns, and IPS or DIPS sizing.

Legend for Typical Features		
<ol style="list-style-type: none"> <li>1. IPS sizing system.</li> <li>2. FMR Approved Class 150 or Class 200 in 2" - 24" IPS pipe sizes.</li> <li>3. A single longitudinal color stripe is extruded into the pipe OD to identify DR.</li> <li>4. Various perforation patterns are available.</li> <li>5. DIPS sizing system.</li> <li>6. The DIPS longitudinal color stripe pattern is three equally spaced pairs of color stripes extruded into the pipe OD.</li> <li>7. Blue color stripes are standard. A blue color shell is available on special order.</li> </ol>	<ol style="list-style-type: none"> <li>8. The IPS longitudinal color stripe pattern is four equally spaced single color stripes extruded into the pipe OD.</li> <li>9. Green color stripes are standard. A green color shell is available on special order.</li> <li>10. Red color stripes standard.</li> <li>11. Purple color stripes are standard. A lavender color shell is available on special order.</li> <li>12. Solid light gray color.</li> <li>13. Light gray color lining extruded into pipe ID.</li> <li>14. Factory assembled casing and carrier.</li> <li>15. Green color stripes are standard.</li> </ol>	<ol style="list-style-type: none"> <li>16. 1-1/2" IPS and smaller sizes only. Black is standard.</li> <li>17. FMR &amp; NSF Approved Class 150 or Class 200. Blue color stripes standard.</li> <li>18. FMR Approved Class 150 or Class 200 in 4" - 24" DIPS pipe sizes.</li> <li>19. Black is standard. Blue color stripes or blue color shell available on special order.</li> <li>20. 2" IPS and 3" IPS made to ASTM D 3035, AWWA C901 and NSF 61. 4" IPS and larger made to ASTM F 714, AWWA C906 and NSF 61.</li> </ol>

Bulletin: PP 109

Revision Date October, 2002

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The Woodlands, Texas

Before using the piping product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the piping product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the piping product is suited and the information is applicable to the user's specific application. This data sheet provides typical physical property information for polyethylene resins used to manufacture the piping product. It is intended for comparing polyethylene piping resins. It is not a product specification, and does not establish minimum or maximum values or manufacturing tolerances for resins or for the piping product. These typical physical property values were determined using compression-molded plaques prepared from resin. Values obtained from tests of specimens taken from the piping product can vary from these typical values. Performance Pipe does not make, and expressly disclaims, all warranties, of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of trade or from any course of dealing in connection with the use of information contained herein or the piping product itself. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information

For more information and technical assistance contact:

Performance Pipe, a division of  
Chevron Phillips Chemical Company LP  
P.O. Box 269006  
Plano, TX 75026-9006  
800.527.0662



## DriscoPlex® PE 3408 HDPE Piping Systems

### Typical Material Physical Properties of DriscoPlex® HDPE High Density Polyethylene Materials

Property	Unit	Test Procedure	Typical Value
Material Designation	—	ASTM F 412	PE 3408
Cell Classification	—	ASTM D-3350	345464C (black) 345464E (color)
Density [3]	g/cm <sup>3</sup>	ASTM D-1505	0.955 (black) 0.947 (color)
Melt Index [4]	g/10 minutes	ASTM D-1238	0.1
Flexural Modulus [5]	psi	ASTM D-790	> 130,000
Tensile Strength [4]	psi	ASTM D-638	3200
SCG (PENT) [6]	hours	ASTM F-1473	> 100
HDB at 73.4°F (23°C) [4]	psi	ASTM D-2837	1600
Color; UV Stabilizer [C]	—	ASTM D-3350	Black with minimum 2% carbon black
Color; UV Stabilizer [E]	—	ASTM D-3350	Color with UV stabilizer
Linear Thermal Expansion	inch/inch/°F	ASTM D-696	9 x 10 <sup>-5</sup>
Elastic Modulus	psi	ASTM D-638	110,000
Brittleness Temperature	°F (°C)	ASTM D-746	< -180 (<-118)
Hardness	Shore D	ASTM D-2240	65

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**PERFORMANCE PIPE™ Municipal & Industrial Series/IPS Pipe Data**

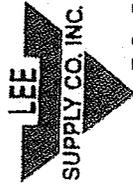
Pipe weights are calculated in accordance with PPI TR-7. Average inside diameter calculated using nominal OD and minimum wall plus 6% for use in estimating fluid flows. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimensions and tolerances in applicable pipe specifications.

Pressure Ratings are for water at 73.4 °F. For other fluid and service temperature, ratings may differ. Refer to Engineering Manual for Chemical and Environmental Considerations.

IPS Pipe Size	100 psi DR 17.0			80 psi DR 21.0			65 psi DR 26.0			50 psi DR 32.5				
	Nominal OD (in)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	IPS Pipe Size
1 1/4"	1.660													1 1/4"
1 1/2"	1.900													1 1/2"
2"	2.375	0.140	2.078	0.43										2"
3"	3.500	0.206	3.063	0.93										3"
4"	4.500	0.265	3.938	1.54										4"
5 3/8"	5.375	0.316	4.705	2.20	0.214	4.046	1.26	0.207	4.936	1.47				5 3/8"
5"	5.563	0.327	4.870	2.35	0.265	5.001	1.93	0.214	5.109	1.57				5"
6"	6.625	0.390	5.798	3.34	0.315	5.957	2.73	0.255	6.084	2.23	0.204	6.193	1.80	6"
7 1/8"	7.125	0.419	6.237	3.86	0.339	6.406	3.16	0.274	6.544	2.58	0.219	6.661	2.08	7 1/8"
8"	8.625	0.507	7.550	5.65	0.411	7.754	4.64	0.332	7.921	3.79	0.265	8.063	3.05	8"
10"	10.750	0.632	9.410	8.78	0.512	9.665	7.21	0.413	9.874	5.87	0.331	10.048	4.75	10"
12"	12.750	0.750	11.160	12.36	0.607	11.463	10.13	0.490	11.711	8.26	0.392	11.919	6.67	12"
13 3/8"	13.375	0.787	11.707	13.61	0.637	12.025	11.15	0.514	12.285	9.09	0.412	12.502	7.35	13 3/8"
14"	14.000	0.824	12.253	14.91	0.667	12.586	12.22	0.536	12.859	9.96	0.431	13.086	8.05	14"
16"	16.000	0.941	14.005	19.46	0.762	14.385	15.96	0.615	14.696	13.01	0.492	14.957	10.50	16"
18"	18.000	1.059	15.755	24.64	0.857	16.183	20.19	0.692	16.533	16.47	0.554	16.826	13.30	18"
20"	20.000	1.176	17.507	30.41	0.952	17.982	24.93	0.769	18.370	20.34	0.615	18.696	16.41	20"
22"	22.000	1.294	19.257	36.80	1.048	19.778	30.18	0.846	20.206	24.61	0.677	20.565	19.86	22"
24"	24.000	1.412	21.007	43.81	1.143	21.577	35.91	0.923	22.043	29.30	0.738	22.435	23.62	24"
26"	26.000	1.529	22.759	51.39	1.238	23.375	42.14	1.000	23.880	34.39	0.800	24.304	27.74	26"
28"	28.000	1.647	24.508	59.62	1.333	25.174	48.66	1.077	25.717	39.88	0.862	26.173	32.19	28"
30"	30.000	1.765	26.258	68.45	1.429	26.971	56.12	1.154	27.554	45.78	0.923	28.043	36.93	30"
32"	32.000	1.882	28.010	77.86	1.524	28.769	63.84	1.231	29.390	52.10	0.985	29.912	42.04	32"
34"	34.000	2.000	29.760	87.91	1.619	30.568	72.06	1.308	31.227	58.81	1.046	31.782	47.43	34"
36"	36.000	2.118	31.510	98.57	1.714	32.366	80.78	1.385	33.064	65.94	1.108	33.651	53.20	36"
42"	42.000	2.471	36.761	134.16	2.000	37.760	109.97	1.615	38.576	89.71	1.292	39.261	72.37	42"
48"	48.000	2.824	42.013	175.23	2.286	43.154	143.65	1.846	44.086	117.18	1.477	44.869	94.56	48"
54"	54.000				2.571	48.549	181.75	2.077	49.597	148.33	1.662	50.477	119.70	54"

Performance Pipe can produce to specialized pipe dimensions. Check with Your Performance Pipe contact for availability of dimensions not listed.

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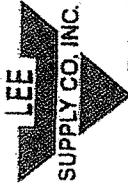


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**PERFORMANCE PIPE™ Municipal & Industrial Series/IPS Pipe Data**

Pipe weights are calculated in accordance with PPI TR-7. Average inside diameter calculated using nominal OD and minimum wall plus 6% for use in estimating fluid flows. Actual ID will vary. When designing components to fit the pipe ID, refer to pipe dimensions and tolerances in applicable pipe specifications.

Pressure Ratings are for water at 73.4 °F. For other fluid and service temperature, ratings may differ. Refer to Engineering Manual for Chemical and Environmental Considerations.

IPS Pipe Size	255 psi DR 7.3			200 psi DR 9.0			160 psi DR 11.0			130 psi DR 13.5				
	Nominal OD (in)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	Minimum Wall (in)	Average ID (in)	Weight (lbs/ft)	IPS Pipe Size
1 1/4"	1.660	0.227	1.179	0.44	0.184	1.270	0.37	0.151	1.340	0.31	0.123	1.399	0.26	1 1/4"
1 1/2"	1.900	0.260	1.349	0.58	0.211	1.453	0.49	0.173	1.533	0.41	0.141	1.601	0.34	1 1/2"
2"	2.375	0.325	1.686	0.91	0.264	1.815	0.76	0.216	1.917	0.64	0.176	2.002	0.53	2"
3"	3.500	0.479	2.485	1.98	0.389	2.675	1.56	0.318	2.826	1.39	0.259	2.951	1.15	3"
4"	4.500	0.616	3.194	3.27	0.500	3.440	2.74	0.409	3.633	2.29	0.333	3.794	1.90	4"
5 3/8"	5.375	0.736	3.815	4.66	0.597	4.109	3.90	0.489	4.336	3.27	0.398	4.531	2.72	5 3/8"
5"	5.563	0.762	3.946	5.00	0.618	4.253	4.18	0.506	4.490	3.51	0.412	4.690	2.91	5"
6"	6.625	0.908	4.700	7.09	0.736	5.065	5.93	0.602	5.349	4.97	0.491	5.584	4.13	6"
7 1/8"	7.125	0.976	5.056	8.20	0.792	5.446	6.66	0.648	5.751	5.75	0.528	6.006	4.78	7 1/8"
8"	8.625	1.182	6.119	12.01	0.958	6.594	10.05	0.784	6.963	8.42	0.639	7.270	7.00	8"
10"	10.750	1.473	7.627	18.66	1.194	8.219	15.61	0.977	8.679	13.09	0.796	9.062	10.87	10"
12"	12.750	1.747	9.046	26.25	1.417	9.746	21.97	1.159	10.293	18.41	0.944	10.749	15.29	12"
13 3/8"	13.375	1.832	9.491	28.88	1.486	10.225	24.18	1.216	10.797	20.26	0.991	11.274	16.84	13 3/8"
14"	14.000	1.918	9.934	31.64	1.556	10.701	26.50	1.273	11.301	22.20	1.037	11.802	18.44	14"
16"	16.000	2.192	11.353	41.33	1.778	12.231	34.60	1.455	12.915	29.00	1.186	13.488	24.09	16"
18"	18.000	2.466	12.772	52.31	2.000	13.760	43.79	1.636	14.532	36.69	1.333	15.174	30.48	18"
20"	20.000	2.740	14.191	64.58	2.222	15.289	54.05	1.818	16.146	45.30	1.481	16.860	37.63	20"
22"	22.000	3.014	15.610	78.14	2.444	16.819	65.40	2.000	17.760	54.82	1.630	18.544	45.56	22"
24"	24.000	3.288	17.029	93.00	2.667	18.346	77.85	2.182	19.374	66.24	1.778	20.231	54.21	24"
26"	26.000				2.889	19.875	91.36	2.364	20.988	76.57	1.928	21.917	63.62	26"
28"	28.000				3.111	21.406	105.95	2.545	22.605	88.78	2.074	23.603	73.78	28"
30"	30.000				3.333	22.934	121.62	2.727	24.219	101.92	2.222	25.289	84.69	30"
32"	32.000							2.909	25.833	115.97	2.370	26.976	96.35	32"
34"	34.000							3.091	27.447	130.93	2.519	28.660	108.81	34"
36"	36.000							3.273	29.061	146.80	2.667	30.346	121.98	36"
42"	42.000													42"
48"	48.000													48"
54"	54.000													54"

Performance Pipe can produce to specialized pipe dimensions. Check with your Performance Pipe contact for availability of dimensions not listed.  
 CPChem and PERFORMANCE PIPE™ are trademarks of Chevron Phillips Chemical Company LP



JUN 23 2006

11711 Hopewell Rd  
Hagerstown MD 21740

June 15, 2006

**DriscoPlex® 4100 PRODUCT QUALITY CERTIFICATION**

CUSTOMER: Lee Supply Company  
PO Box 35  
Charleroi PA 15022

ATTENTION: Jerry Biagini

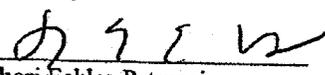
CUSTOMER ORDER NO: 0600  
PERFORMANCE PIPE ORDER NO: 6248274  
SHIPPING DATE: 04/24/06  
EXTRUDER #: 05  
EXTRUSION DATE(S):04/06  
DELIVERY #: 87127706

QUANTITY: 8,000'  
PRODUCT: 6''dr 17 4100

This product quality certification letter for DriscoPlex® 4100 series pipe has been prepared at your request. DriscoPlex® 4100 series pipe is manufactured from polyethylene resin that meets Grade PE34 and a cell classification of 345464C in accordance with ASTM D 3350. DriscoPlex® 4100 series pipe material is listed by the Plastic Pipe Institute in PPI TR-4 with a standard grade recommended hydrostatic design basis of 1600 psi at 73°F (23°C), and a recommended hydrostatic design basis of 800 psi at 140°F (60°C).

DriscoPlex® 4100 series pipe is manufactured in accordance with the requirements of AWWA C906 and ASTM F 714 or AWWA C901 and ASTM D3035. Each length of DriscoPlex 4100 pipe is marked in accordance with the applicable standards. DriscoPlex® 4100 series meets NSF standards 14 and/or 61 requirements for potable water piping systems, and AWWA requirements for water distribution.

Sincerely,

  
\_\_\_\_\_  
Sheri Eckles-Petrucci  
QA Supervisor

*[Handwritten signature]*

0600 # 0600

### CHEVRON PHILLIPS PERFORMANCE PIPE

Plant: Hagerstown  
PR #: 100435660

Product Description: 41P 06.00" SDR 17.00 0040'JT BLK I 61  
Line #: 05

Start Date: 4/22/2006  
End Date: 4/24/2006

Minimum Wall (IN):	0.393	Minimum Toe-In(%):	0.287
Maximum Wall (IN):	0.435	Maximum Toe-In(%):	0.468
Minimum OD (IN):	6.610	Minimum Hoop Stress(PSI):	3382.000
Maximum OD (IN):	6.635	Minimum Hoop Stress(PSI):	3382.000
Minimum ID (IN):	5.770	Minimum Burst Pressure:	433.000
Maximum ID (IN):	5.837	Maximum Burst Pressure:	433.000
Minimum Eccentricity (%):	2.404	Minimum Density:	0.953
Maximum Eccentricity (%):	6.089	Maximum Density:	0.954
Minimum Out of Round (IN):	0.136	Minimum Carbon Black (%):	2.610
Maximum Out of Round (IN):	0.257	Maximum Carbon Black (%):	2.640
Minimum Ovality (%):	2.055	Minimum Melt Index:	8.200
Maximum Ovality (%):	3.879	Maximum Melt Index:	8.300

Resin: CPCHEM TR480X

Resin Lot: 7260365; 7260366

Concentrate: CPCHEM M151

Concentrate Lot: 1453100

Stripe/Shell Concentrate:

Stripe/Shell Concentrate Lot:

Number of Samples: 61

Ash is recorded under Carbon Black when Carbon Black is not present.



JUN 23 2006

11711 Hopewell Rd  
Hagerstown MD 21740

June 15, 2006

**DriscoPlex® 4100 PRODUCT QUALITY CERTIFICATION**

CUSTOMER: Lee Supply Company  
PO Box 35  
Charleroi PA 15022

ATTENTION: Jerry Biagini

173624

CUSTOMER ORDER NO: 0600  
PERFORMANCE PIPE ORDER NO: 6245672  
SHIPPING DATE: 04/18/06  
EXTRUDER #: 05  
EXTRUSION DATE(S): 03/06 04/06  
DELIVERY #: 87123657

QUANTITY: 4,400'  
PRODUCT: 8"dr 17 4100

This product quality certification letter for DriscoPlex® 4100 series pipe has been prepared at your request. DriscoPlex® 4100 series pipe is manufactured from polyethylene resin that meets Grade PE34 and a cell classification of 345464C in accordance with ASTM D 3350. DriscoPlex® 4100 series pipe material is listed by the Plastic Pipe Institute in PPI TR-4 with a standard grade recommended hydrostatic design basis of 1600 psi at 73°F (23°C), and a recommended hydrostatic design basis of 800 psi at 140°F (60°C).

DriscoPlex® 4100 series pipe is manufactured in accordance with the requirements of AWWA C906 and ASTM F 714 or AWWA C901 and ASTM D3035. Each length of DriscoPlex 4100 pipe is marked in accordance with the applicable standards. DriscoPlex® 4100 series meets NSF standards 14 and/or 61 requirements for potable water piping systems, and AWWA requirements for water distribution.

Sincerely,

Sheri Eckles-Petrucci  
QA Supervisor

Checked/Marked

Order # 0600

### CHEVRON PHILLIPS PERFORMANCE PIPE

Plant: Hagerstown  
PR #: 100433052

Product Description: 41P 08.00" SDR 17.00 0040JT BLK I 61  
Line #: 05  
Start Date: 3/31/2006

End Date: 4/3/2006

Minimum Wall (IN): 0.515  
Maximum Wall (IN): 0.575  
Minimum OD (IN): 8.607  
Maximum OD (IN): 8.636  
Minimum ID (IN): 7.503  
Maximum ID (IN): 7.602  
Minimum Eccentricity (%): 1.331  
Maximum Eccentricity (%): 9.043  
Minimum Out of Round (IN): 0.084  
Maximum Out of Round (IN): 0.147  
Minimum Ovality (%): 0.975  
Maximum Ovality (%): 1.705

Minimum Toe-In(%): 0.162  
Maximum Toe-In(%): 0.545  
Minimum Hoop Stress(PSI): 3452.000  
Minimum Hoop Stress(PSI): 3543.000  
Minimum Burst Pressure: 457.000  
Maximum Burst Pressure: 461.000  
Minimum Density: 0.953  
Maximum Density: 0.954  
Minimum Carbon Black (%): 2.400  
Maximum Carbon Black (%): 2.600  
Minimum Melt Index: 8.900  
Maximum Melt Index: 10.000

Resin:

CPCHEM TR480X

Resin Lot:

7160312; 7160340; 7160341

Concentrate:

CPCHEM M151

Concentrate Lot:

1453097; 1453099

Stripe/Shell Concentrate:

Stripe/Shell Concentrate Lot:

Number of Samples:

86

Ash is recorded under Carbon Black when Carbon Black is not present.



JUN 1 2 2006

11711 Hopewell Rd  
Hagerstown MD 21740

June 5, 2006

**DriscoPlex® 4100 PRODUCT QUALITY CERTIFICATION**

CUSTOMER: Lee Supply Company  
PO Box 35  
Charleroi PA 15022

ATTENTION: Jerry Biagini

CUSTOMER ORDER NO: 0600  
PERFORMANCE PIPE ORDER NO: 6245672  
SHIPPING DATE: 04/24/06  
EXTRUDER #: 04  
EXTRUSION DATE(S): 03/06 04/06  
DELIVERY #: 87127473

QUANTITY: 17,920  
PRODUCT: 4" dr 17 4100

This product quality certification letter for DriscoPlex® 4100 series pipe has been prepared at your request. DriscoPlex® 4100 series pipe is manufactured from polyethylene resin that meets Grade PE34 and a cell classification of 345464C in accordance with ASTM D 3350. DriscoPlex® 4100 series pipe material is listed by the Plastic Pipe Institute in PPI TR-4 with a standard grade recommended hydrostatic design basis of 1600 psi at 73°F (23°C), and a recommended hydrostatic design basis of 800 psi at 140°F (60°C).

DriscoPlex® 4100 series pipe is manufactured in accordance with the requirements of AWWA C906 and ASTM F 714 or AWWA C901 and ASTM D3035. Each length of DriscoPlex 4100 pipe is marked in accordance with the applicable standards. DriscoPlex® 4100 series meets NSF standards 14 and/or 61 requirements for potable water piping systems, and AWWA requirements for water distribution.

Sincerely,

Sheri Eckles-Petrucci  
QA Supervisor

RECEIVED  
JUN 12 2006

*nda # 0600*

### CHEVRON PHILLIPS PERFORMANCE PIPE

Plant: Hagerstown  
PR #: 100429738

Product Description: 41P 04.00" SDR 17.00 0040'JT BLK I 61  
Line #: 05  
Start Date: 3/6/2006

End Date: 3/7/2006

Minimum Wall (IN):	0.267	Minimum Toe-In(%):	0.111
Maximum Wall (IN):	0.305	Maximum Toe-In(%):	0.289
Minimum OD (IN):	4.495	Minimum Hoop Stress(PSI):	3562.000
Maximum OD (IN):	4.519	Minimum Hoop Stress(PSI):	3562.000
Minimum ID (IN):	3.909	Minimum Burst Pressure:	455.000
Maximum ID (IN):	3.956	Maximum Burst Pressure:	455.000
Minimum Eccentricity (%):	4.096	Minimum Density:	0.954
Maximum Eccentricity (%):	11.842	Maximum Density:	0.954
Minimum Out of Round (IN):	0.169	Minimum Carbon Black (%):	2.400
Maximum Out of Round (IN):	0.185	Maximum Carbon Black (%):	2.470
Minimum Ovality (%):	3.756	Minimum Melt Index:	7.300
Maximum Ovality (%):	4.111	Maximum Melt Index:	8.600

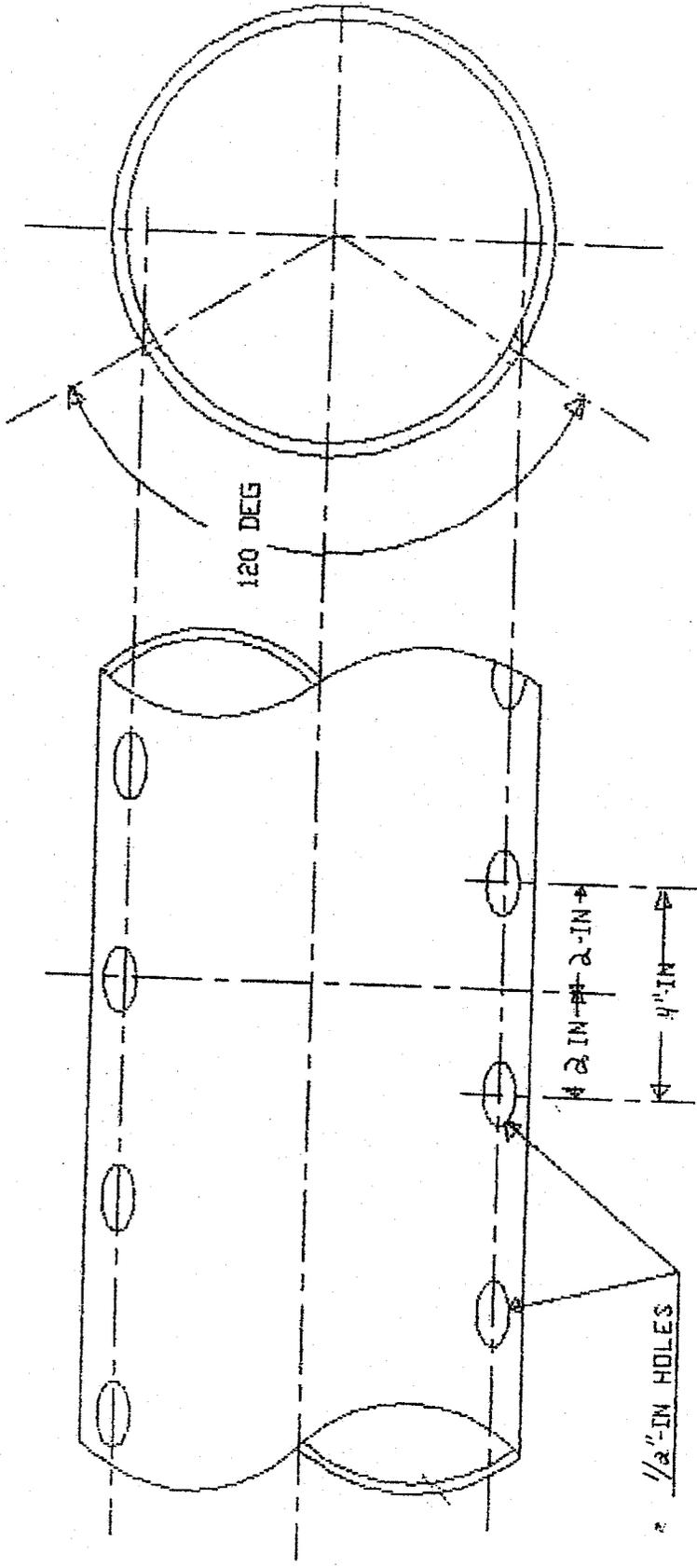
Resin: CPCHEM TR480X Resin Lot: 6160149; 6160165

Concentrate: CPCHEM M151 Concentrate Lot: VTA910003

Stripe/Shell Concentrate: Stripe/Shell Concentrate Lot:

Number of Samples: 29

Ash is recorded under Carbon Black when Carbon Black is not present.



SHOP SKETCH - NOT TO SCALE

4 ROWS 120 DEGREES APART  
 1/2" IN CENTERS  
 1/2" IN HOLES  
 STAGGERED

LEE SUPPLY COMPANY INC  
 FIRST & LINCOLN AVE.  
 CHARLEROI, PA 15022

DRAWING NUMBER 261203BS

PERFORATION PATTERN

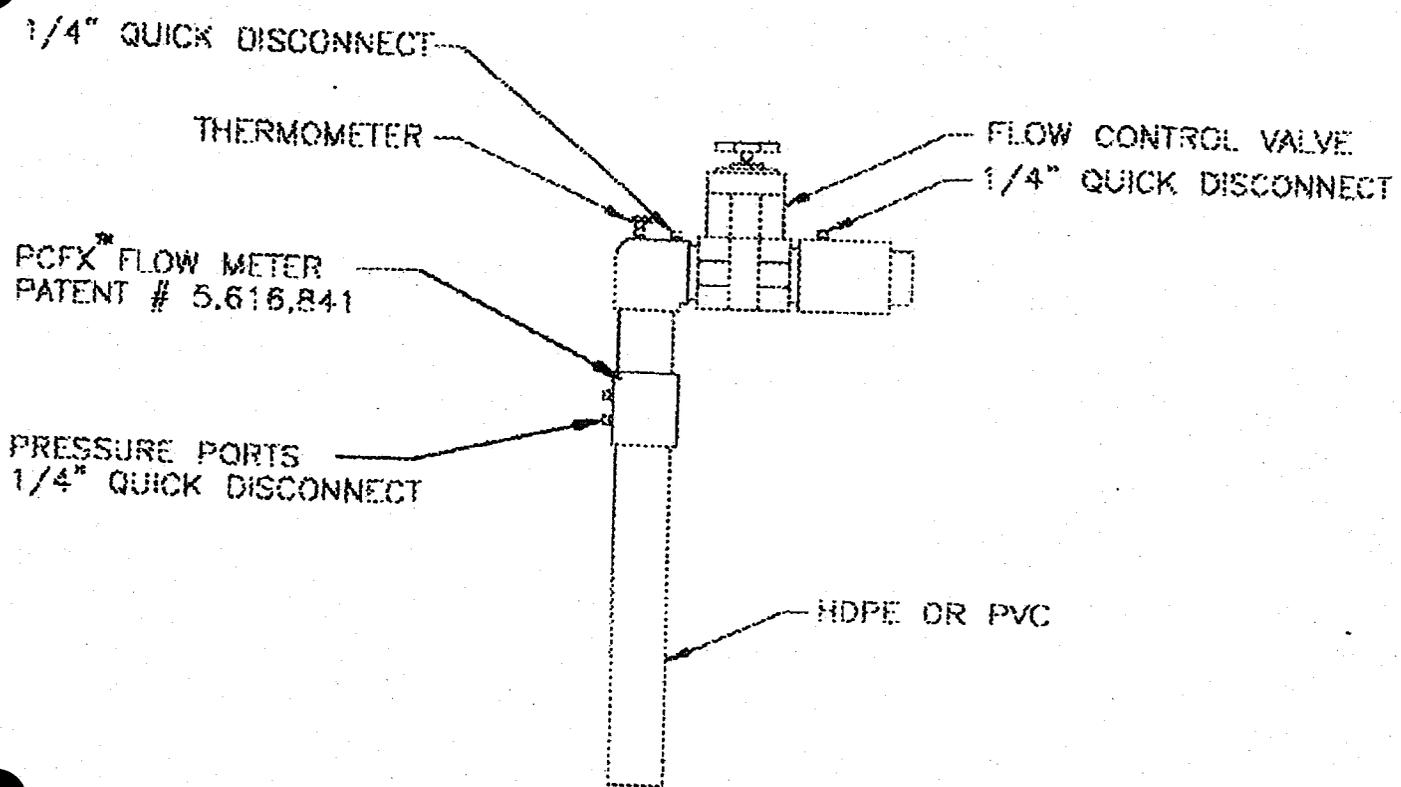
**Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Contractor Submittals/Shop Drawings**

**Pipe Welder's Certification**



**Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Contractor Submittals/Shop Drawings**

**Wellhead**



WELLHEAD SIZE (INCHES)
2
3
4

LEE SUPPLY CO., INC.  
 P. O. BOX #35  
 CHARLEROI, PA 15022

PC 1000FX™  
 Precise Control Wellhead  
 Patent # 5,616,841



**LFG & E**

Landfill Gas & Environmental Products, Inc.

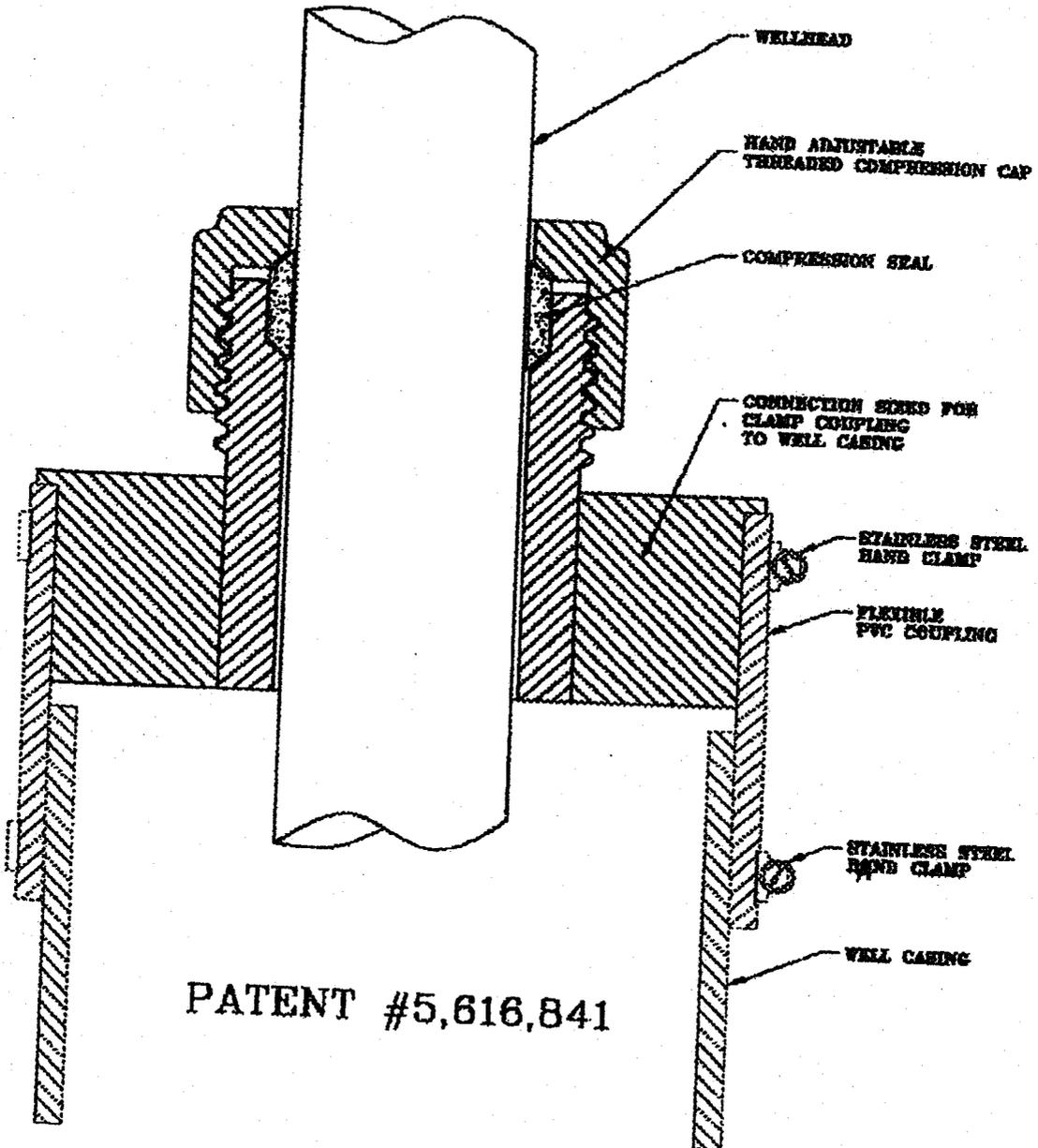
(619) 596-9083 FAX (619) 596-9088  
 9855 Prospect, Santee, CA 92071

DRAWING #: PX-2\*\*-\*

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 PC 1000FX and PCFX are trademarks of LFG&E.  
 All designs are subject to change without notice.  
 Patent #5,616,841

LEE SUPPLY CO., INC.  
 P. O. BOX #35  
 CHARLEROI, PA 15022

LFG&E WELLHEAD CONNECTION KIT  
 SLIDING COMPRESSION ADAPTOR BY FLEXIBLE COUPLING



PATENT #5,616,841



**LFG & E**

Landfill Gas & Environmental Products, Inc.

(519) 596-9083 FAX (519) 596-9088  
 9855 Prospect, Santee, CA 92071

ORDERING #: SA-\*\*\*-\*\*\*-D  
 DISTRIBUTED BY:

**LEE SUPPLY CO., INC.**  
 P. O. BOX #35  
 CHARLEROI, PA 15022

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**Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Contractor Submittals/Shop Drawings**

**Final As-built Drawings**





## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Tues-07/18/06

Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 89 Lo: 61  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. 1.5 OT Shift: 8:00 AM to 5:30 PM

(Contractor) Hours Worked: 10 Reg.            OT Shift: 7:30 AM to 5:30 PM

General Contractor's Work Force			and		Subcontractor's Work Force		
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
Total	4	*	Total		*		*

\*Designates subcontractors

Activity and Location: Cell 6 excavation of protective cover layer

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Excavation of the protective rock layer on the east trench continued
- Willco on-site to low pressure air test solid pipe
  - west 8" solid HDPE pipe (220 LF) passed, 7 min @ 4 psi
  - east 8" solid HDPE pipe (180 LF) passed, 7 min @ 4 psi
- Contractor moved stormwater tarp; decided to cut portion of tarp and resew
- Al Hetzel with the Solid Waste Section stopped by to see the installation, no comments from Al
- Excavation of approximately 580 LF of the east trench

Attachments: Yes X No     

Signed *[Signature]*  
Project Representative

Description: CDM low pressure air test forms and Willco air test forms  
(Pipe Test Reports, Concrete Placement Reports, etc.)



## Low Pressure Air Leakage Test

CDM Project No. 6447- Date: 07/18/06

Project: Cell 6 Gas Collection System Installation

Client: Buncombe County, North Carolina

Contractor: Thalle

Resident Project Rep: KJY

Location of Pipe Tested: 8" solid HDPE pipe - east line

Length of Line: 180'

Test Procedure: Plug line and add air

Test:

Air Pressure:

Start 0 psi Stop 4 psi (Test Pressure Not to Drop 1.0 psig)

Time:

Start -- Stop -- Elapsed Time 7 Allowable (fr. table)

Test Results: Passed  Failed



## Low Pressure Air Leakage Test

CDM Project No. 6447- Date: 07/18/06

Project: Cell 6 Gas Collection System Installation

Client: Buncombe County, North Carolina

Contractor: Thalle

Resident Project Rep: KJY

Location of Pipe Tested: 8" solid HDPE pipe - west line

Length of Line: 220'

Test Procedure: Plug line and add air

Test:

Air Pressure:

Start 0 psi Stop 4 psi (Test Pressure Not to Drop 1.0 psig)

Time:

Start -- Stop -- Elapsed Time 7 Allowable (fr. table)

Test Results: Passed  Failed



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Wednes-07/19/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 87 Lo: 63  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. 1.5 OT Shift: 8:00 AM to 5:30 PM

(Contractor) Hours Worked: 10 Reg. \_\_\_\_\_ OT Shift: 7:30 AM to 5:30 PM

General Contractor's Work Force			and		Subcontractor's Work Force		
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
<b>Total</b>	<b>4</b>	<b>*</b>	<b>Total</b>		<b>*</b>		<b>*</b>

\*Designates subcontractors  
 Activity and Location: Cell 6 excavation of protective cover layer and laying pipe

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Completed excavation of the east trench
- Began laying 8" perforated HDPE pipe at south end of east trench
  - placed apprxly 740 LF of 8" perforated HDPE pipe
  - placed apprxly 165 LF of 8" solid HDPE pipe
- Backfilled trench with protective cover apprxly 150 LF of east trench

Attachments: Yes  No

Signed *[Signature]*  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Thurs-07/20/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 87 Lo: 63  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. 1 OT Shift: 8:00 AM to 5:00 PM

(Contractor) Hours Worked: 10 Reg.            OT Shift: 7:30 AM to 5:30 PM

General Contractor's Work Force			and					Subcontractor's Work Force			
Labor Classification			Equipment Classifications								
	I	II*		Type	Type*	Size	Size*				
Superintendent	1		Loader	Caterpillar		950F					
Laborers	3		Excavator	Takeuchi		TB125					
<b>Total</b>	<b>4</b>	<b>*</b>	<b>Total</b>		<b>*</b>						<b>*</b>

\*Designates subcontractors  
 Activity and Location: Cell 6 excavation of protective cover layer

Defective work noted today to be corrected later: \_\_\_\_\_



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Fri-07/21/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 87 Lo: 66  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. \_\_\_\_\_ OT Shift: 8:00 AM to 4:00 PM

(Contractor) Hours Worked: 8.5 Reg. \_\_\_\_\_ OT Shift: 7:30 AM to 4:00 PM

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
Total	4	*	Total		*		*

\*Designates subcontractors

Activity and Location: Cell 6 excavation of protective cover layer

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Completed excavation of the west trench
- welded all 8" solid and perforated HDPE pipe together for west collection pipe
- welded blind flange for west collection pipe
- Laid all pipe starting at southern end:
  - apprxly 219 LF of 8" solid HDPE pipe
  - apprxly 630 LF of 8" perforated HDPE pipe
- Hallation on-site at 2 PM to repair stormwater tarp
- Contractor and RPR off-site at 4 PM

Attachments: Yes  No

Signed *[Signature]*  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Sat-07/22/06

Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 85 Lo: 66  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: \_\_\_\_\_ Reg. \_\_\_\_\_ OT Shift: \_\_\_\_\_ to \_\_\_\_\_

(Contractor) Hours Worked: \_\_\_\_\_ Reg. \_\_\_\_\_ OT Shift: \_\_\_\_\_ to \_\_\_\_\_

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent			Loader	Caterpillar		950F	
Laborers			Excavator	Takeuchi		TB125	
Total		*	Total		*		*

\*Designates subcontractors

Activity and Location: No work was completed

Defective work noted today to be corrected later: \_\_\_\_\_



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Sun-07/23/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 79 Lo: 70  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: \_\_\_\_\_ Reg. \_\_\_\_\_ OT Shift: \_\_\_\_\_ to \_\_\_\_\_

(Contractor) Hours Worked: \_\_\_\_\_ Reg. \_\_\_\_\_ OT Shift: \_\_\_\_\_ to \_\_\_\_\_

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent			Loader	Caterpillar		950F	
Laborers			Excavator	Takeuchi		TB125	
Total		*	Total		*		*

\*Designates subcontractors  
 Activity and Location: No work was completed

Defective work noted today to be corrected later: \_\_\_\_\_



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Mon-07/24/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 83 Lo: 67    Clear     Partly    Cloudy    Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 7 Reg.    OT Shift: 9:00 AM to 5:00 PM

(Contractor) Hours Worked: 8 Reg.    OT Shift: 8:00 AM to 5:00 PM

General Contractor's Work Force			and		Subcontractor's Work Force		
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
<b>Total</b>	<b>4</b>	<b>*</b>	<b>Total</b>		<b>*</b>		<b>*</b>

\*Designates subcontractors  
 Activity and Location: Backfill of east and west trench

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Contractor backfilled east and west trench using the protective stone excavated from the trench, matching the existing surface of the adjacent stone cover.
- Portions of the 8" HDPE were left exposed at the southern ends, changes in alignment, and at changes in alignment and at the change from perforated to solid pipe for survey.
- Surveyor expected onsite 07-28

Attachments: Yes  No

Signed Robert E. Grossi  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Tues-07/25/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 85 Lo: 70 Clear  Partly Cloudy Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. \_\_\_\_\_ OT Shift: 8:00 AM to 5:00 PM

(Contractor) Hours Worked: 8 Reg. \_\_\_\_\_ OT Shift: 8:00 AM to 5:00 PM

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
Total	4	*	Total		*		*

\*Designates subcontractors

Activity and Location: Excavation of existing 24" gas header for both east and west gas collection lines

Defective work noted today to be corrected later: \_\_\_\_\_

(Continued on next page)



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Wed-07/26/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 86 Lo: 72 Clear  Partly Cloudy Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 4 Reg. OT Shift: 8:00 AM to 12:00 PM

(Contractor) Hours Worked: 4 Reg. OT Shift: 7:00 AM to 11:00 AM

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
Note: Superintendent left site at 8:30 am to travel to Spartensburg, SC, to return 07/27/06 am.							
Total	4	*	Total		*		*

\*Designates subcontractors  
Activity and Location: Contractor keyed in stormwater tarp

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Contractor keyed in stormwater tarp in the NW corner of the tarp covered area

- Contractor keyed in tarp by excavating 10-12" of protective cover stone and then laid edge of tarp into the stone trench and covered the tarp with the excavated stone.

This was done for 2/3<sup>rd</sup> of the length of the tarp west of the stormwater berm, no additional stone was placed over keyed in edge

- Contractor place jersey barrier at NW corner to secure tarp

- No other work was performed, Contractor left the jobsite at 11AM

Multiple horizontal lines for additional description text.

Attachments: Yes  No

Signed Robert E. Bussie  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

**DAILY CONSTRUCTION PROGRESS REPORT**

Project: Buncombe County Solid Waste Management Date: Thurs-07/27/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 86 Lo: 72      Clear   x   Partly      Cloudy      Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. 1.5 OT Shift: 8:00 AM to 5:30 PM

(Contractor) Hours Worked: 10.5 Reg.      OT Shift: 7:00 AM to 5:30 PM

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
Total	4	*	Total		*		*

\*Designates subcontractors  
 Activity and Location: Contractor keyed in stormwater tarp

Defective work noted today to be corrected later:

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Contractor keyed in stormwater tarp in the NE corner of the tarp covered area (8:30-12)

- Contractor keyed in tarp by excavating 10-12" of protective cover stone and then laid edge of tarp into the stone trench and covered the tarp with the excavated stone.

This was done for 2/3<sup>rd</sup> of the length of the tarp east of the stormwater berm, no additional stone was placed over keyed in edge

- Contractor also placed existing stone berm on keyed in edge along the bottom 1/3<sup>rd</sup> east and west side (1 PM to 2 PM)

- Brossoie left site at 2 PM, KJY on-site at 2 PM

Attachments: Yes  No

Signed Kt J. J.  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Fri-07/28/06

Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 87 Lo: 73  Clear  Partly  Cloudy  Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg.  OT Shift: 8:00 AM to 4:00 PM

(Contractor) Hours Worked: 8.5 Reg.  OT Shift: 7:30 AM to 4:00 PM

General Contractor's Work Force			and		Subcontractor's Work Force		
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
Total	4	*	Total		*		*

\*Designates subcontractors

Activity and Location: Connections to existing 24" gas header

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Contractor completed the following for both the east and west wellhead configurations:

- fused HDPE saddle to existing 24" gas header

- fused 4" HDPE connection pipe to saddle

- connected 4" fernco and 1 1/2" PVC ball valve to 4" HDPE pipe

- leak tested HDPE saddle weld and 4" HDPE pipe to saddle weld by turning flare on, closing PVC ball valve, placing soapy water around welds and observing for bubbles or water movement. Both east and west lines passed without observation of bubbles, etc.

- Contractor backfilled soil in gas header pits (east and west) up above existing pipe crest, will bring a tamper in on Monday to compact as the remainder of the pit is backfilled

Renamed gas collection lines the following:

West = Gas - 6A

East = Gas - 6B

Attachments: Yes  No

Signed [Signature]  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Sat-07/29/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 70 Lo: 68 Clear  Partly Cloudy Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: \_\_\_\_\_ Reg. \_\_\_\_\_ OT Shift: \_\_\_\_\_ to \_\_\_\_\_

(Contractor) Hours Worked: \_\_\_\_\_ Reg. \_\_\_\_\_ OT Shift: \_\_\_\_\_ to \_\_\_\_\_

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent			Loader	Caterpillar		950F	
Laborers			Excavator	Takeuchi		TB125	
Total		*	Total		*		*

\*Designates subcontractors  
 Activity and Location: No work was completed

Defective work noted today to be corrected later: \_\_\_\_\_



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Sun-07/30/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 84 Lo: 70      Clear   x   Partly      Cloudy      Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked:      Reg.      OT Shift:      to     

(Contractor) Hours Worked:      Reg.      OT Shift:      to     

General Contractor's Work Force			and		Subcontractor's Work Force		
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent			Loader	Caterpillar		950F	
Laborers			Excavator	Takeuchi		TB125	
Total		*	Total		*		*

\*Designates subcontractors  
 Activity and Location: No work was completed

Defective work noted today to be corrected later:



## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Mon-07/31/06

Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 75 Lo: 63 Clear  Partly Cloudy Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 7.5 Reg. OT Shift: 11 AM to 6:30 PM

(Contractor) Hours Worked: 10.5 Reg. OT Shift: 8 AM to 6:30 PM

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
			Skid steer	Bobcat		T200	
Total	4	*	Total		*		*

\*Designates subcontractors

Activity and Location: Keyed in stormwater tarp around stormwater berm and backfilled gas header pits

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- KJY on-site at 11AM
- Surveyor on-site in the AM and completed survey of gas collection system
- Contractor keyed in stormwater tarp on stormwater berm
- Skid steer on-site at 1 PM
- Contractor completed backfill using excavated fill at both east and west gas header connection pits and used jumping jack to ensure adequate compaction

Attachments: Yes  No

Signed K. J. Y.  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

## DAILY CONSTRUCTION PROGRESS REPORT

Project: Buncombe County Solid Waste Management Date: Tues-08/01/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 91 Lo: 66    Clear     Partly    Cloudy    Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 8 Reg. 2 OT Shift: 8:00 AM to 6:00 PM

(Contractor) Hours Worked: 11 Reg.    OT Shift: 7:30 AM to 6:30 PM

General Contractor's Work Force			and Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
			Skid steer	Bobcat		T200	
Total	4	*	Total		*		*

\*Designates subcontractors  
 Activity and Location: Wellhead connections

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- At both east and west wellheads the following was completed:

- Contractor fused 8"x6" HPDE solid tee and blind flange to 8" solid HDPE pipe
- Contractor connected 6"x1.5" compression adptr and 6" fernco to 6" solid tee
- Contractor connected wellhead to compression adptr
- Contractor connected 4"x1.5" fernco and bushing
- Contractor didn't have all pvc pieces to complete wellhead configuration, need to add pvc pieces and hoses

- FLA Jetclean on-site at 9:30 AM, jetcleaned both lines but didn't have all equipment to conduct CCTV video

- Contractor completed keying in stormwater tarp at stormwater berm and the remaining portions of the stormwater tarp without stone berm, completed by placing approxly 12" of stone on keyed in edge of tarp

Attachments: Yes  No

Signed K. J. [Signature]  
Project Representative

Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

**DAILY CONSTRUCTION PROGRESS REPORT**

Project: Buncombe County Solid Waste Management Date: Wed-08/02/06  
Cell 6 LFG Collection System Construction Project CDM Contract No.: 6447 -

Location: Buncombe County, North Carolina

Weather: Hi 93 Lo: 67    Clear     Partly    Cloudy    Precipitation

Contractor and Subcontractors: Thalle Construction Co., Inc.

(Observation) Hours Worked: 6 Reg.    OT Shift: 8:00 AM to 2:00 PM

(Contractor) Hours Worked: 6.5 Reg.    OT Shift: 7:30 AM to 2:00 PM

General Contractor's Work Force			Subcontractor's Work Force				
Labor Classification			Equipment Classifications				
	I	II*		Type	Type*	Size	Size*
Superintendent	1		Loader	Caterpillar		950F	
Laborers	3		Excavator	Takeuchi		TB125	
			Skid steer	Bobcat		T200	
Total	4	*	Total		*		*

\*Designates subcontractors

Activity and Location: Wellhead testing and Final Inspection

Defective work noted today to be corrected later: \_\_\_\_\_

Description: (List work in progress, item no., quantity installed, location, comments, problems, visitors, delays, and causes, accidents, special instructions received or given tests made, etc.)

- Tested wellhead configuration using the Dwyer (manometer, flow meter) and the Landgem to verify that system is air tight. Shut off the wellhead valve and turned on the flare station. We monitored the vacuum at the sample port just beyond the valve. This port should register the blower vacuum (40in water). Using the Dwyer, both the east and west register 38-40in of water column. We also hooked up the Landgem to the same sample port. Denese stated that it read approxly the same oxygen percentages as current wellheads, meaning no additional oxygen was getting into the system and the wellhead configuration was adequately air tight. Both east and west wellhead configuration passed.

- Final Inspection was held at 10 AM. Denese Ballew (County), Ryan Coward (Thalle), and Kenton Yang (CDM) were present. We examined the wellhead configurations and deemed the project final, with review and approval of the CCTV tapes by the CDM. FLA Jetclean to be out tomorrow to CCTV.

Attachments: Yes  No

Signed K. Q. Yang  
Project Representative

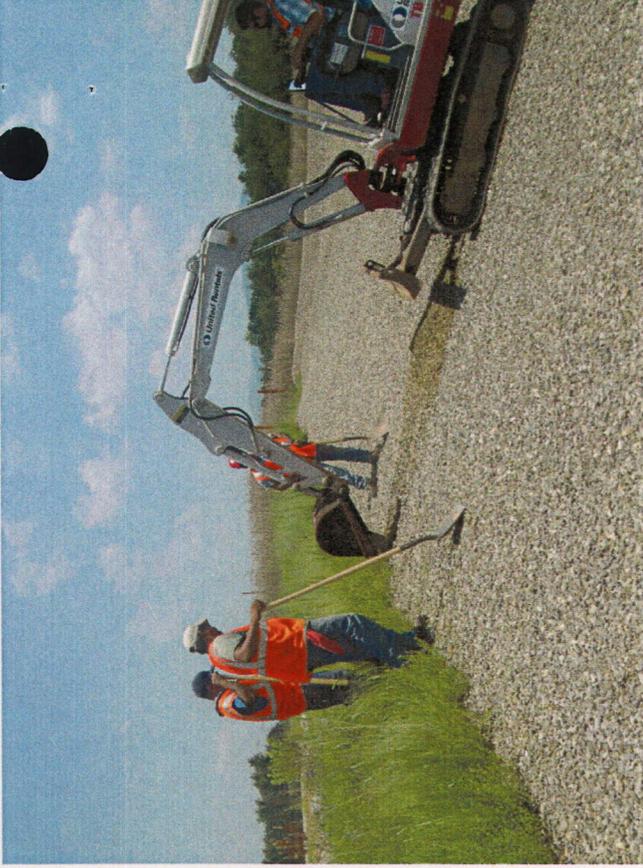
Description: \_\_\_\_\_  
(Pipe Test Reports, Concrete Placement Reports, etc.)

**Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs**

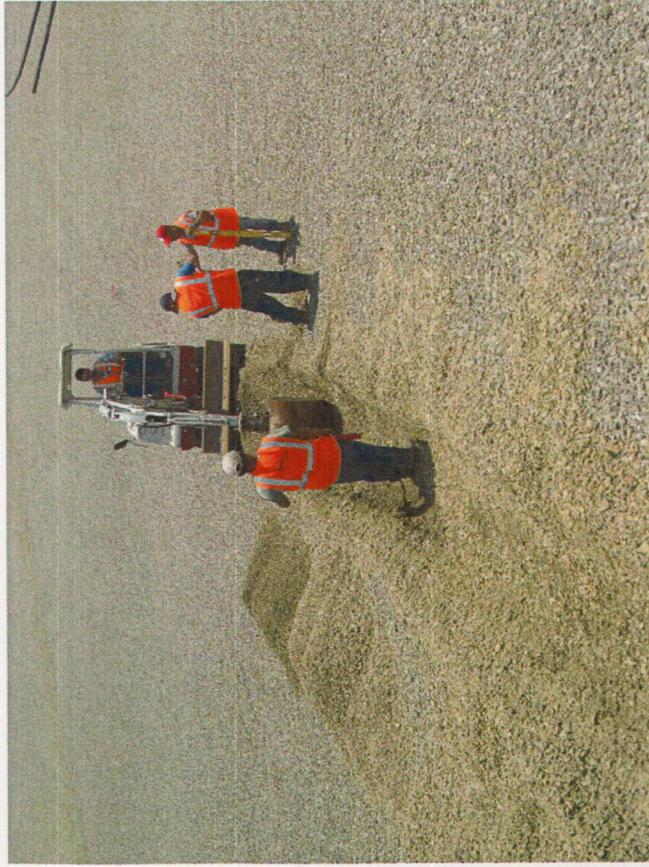
**July 17, 2006**



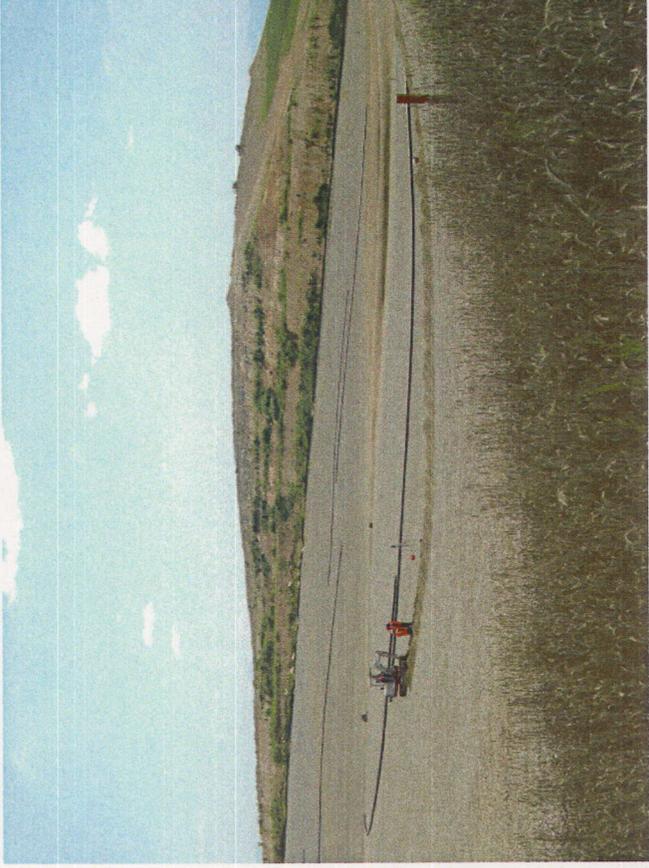
HDPE Excavator Blade Protection



Excavation of East Trench



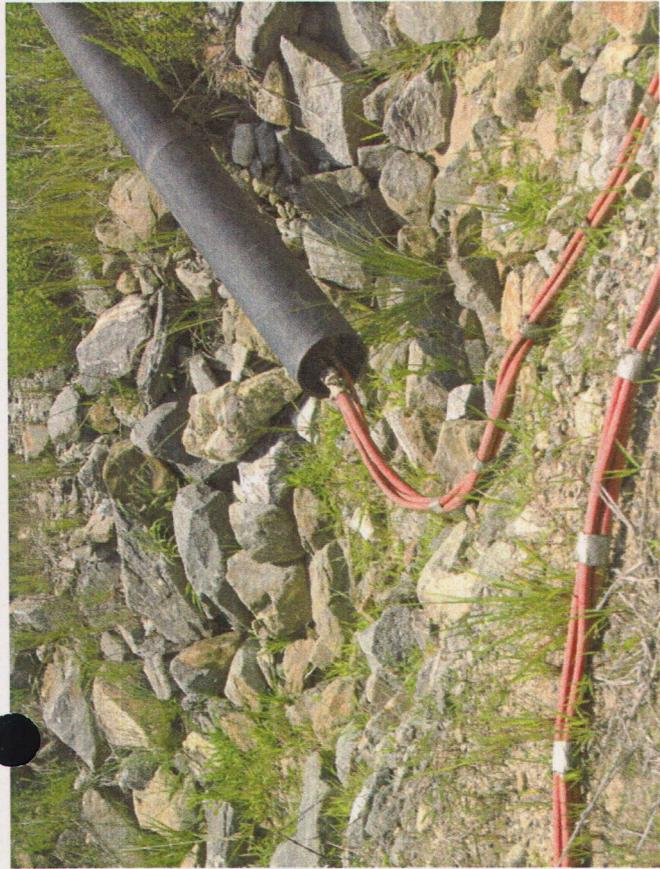
Excavation of East Trench



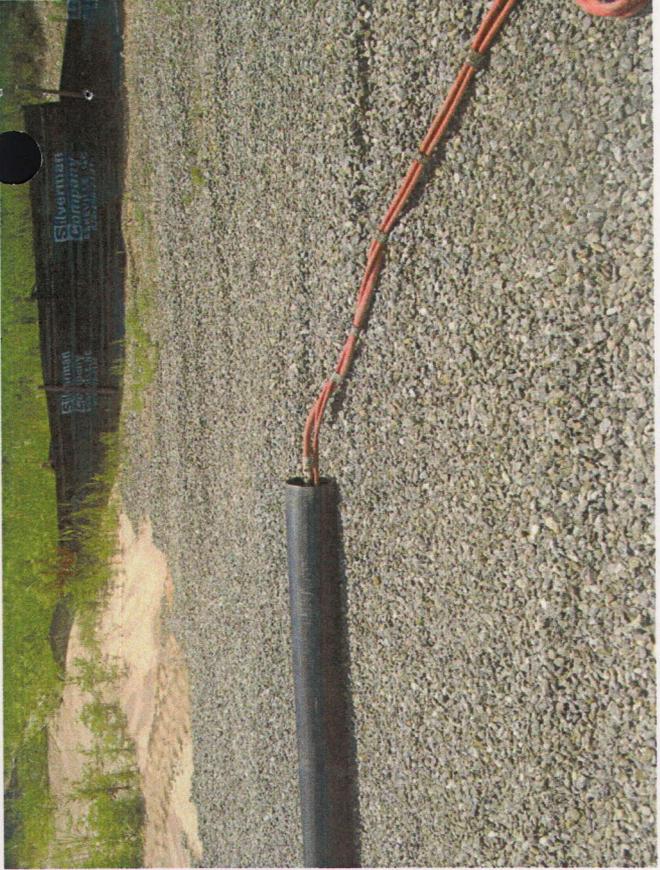
Excavation of East Trench

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

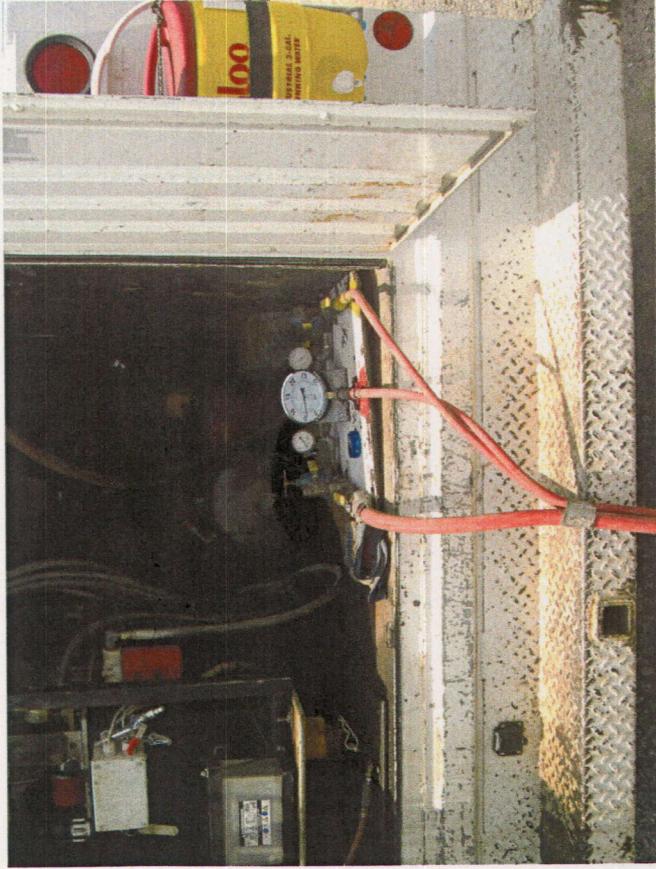
July 18, 2006



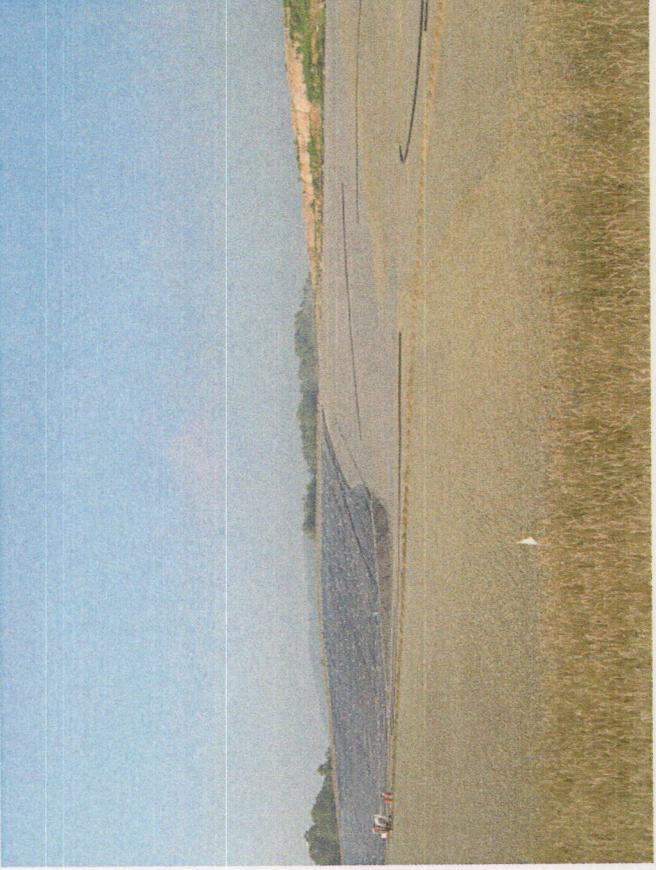
Low Air Pressure Testing of 8" Solid HDPE Pipe



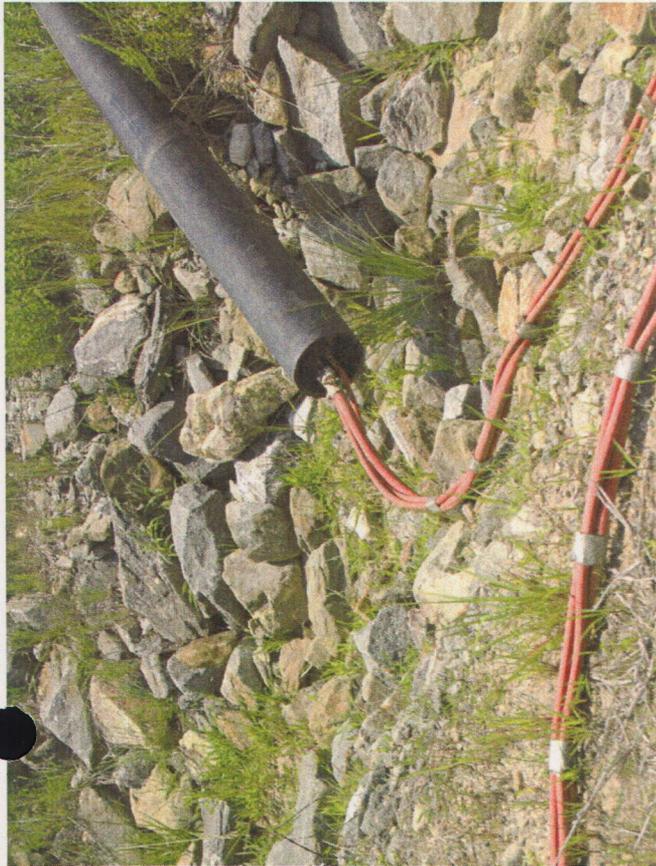
Low Air Pressure Testing of 8" Solid HDPE Pipe



Low Air Pressure Testing of 8" Solid HDPE Pipe



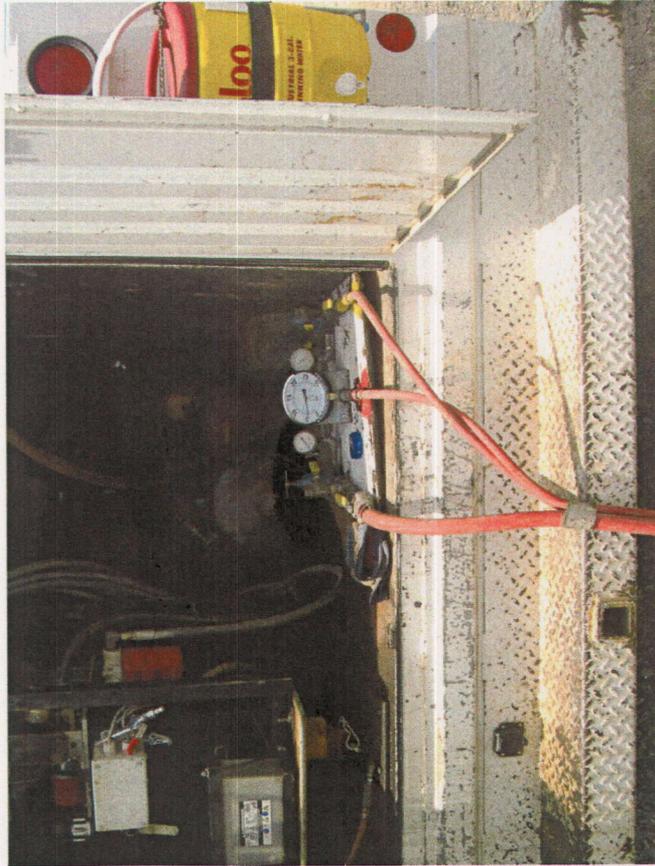
Excavation of East Trench



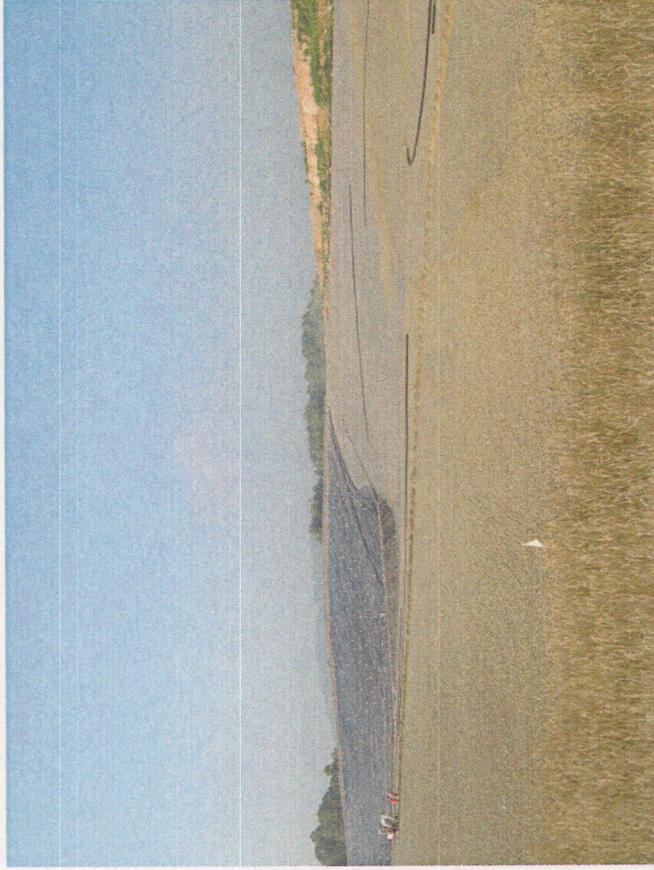
Low Air Pressure Testing of 8" Solid HDPE Pipe



Low Air Pressure Testing of 8" Solid HDPE Pipe



Low Air Pressure Testing of 8" Solid HDPE Pipe



Excavation of East Trench

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Quality Assurance Report  
Engineer: CDM  
Date: July 18, 2006

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

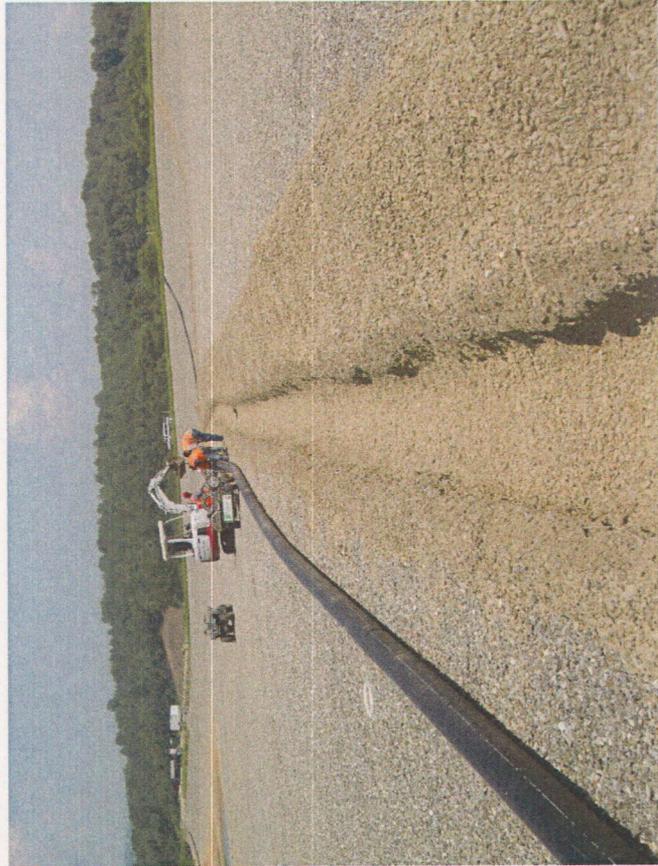
July 19, 2006



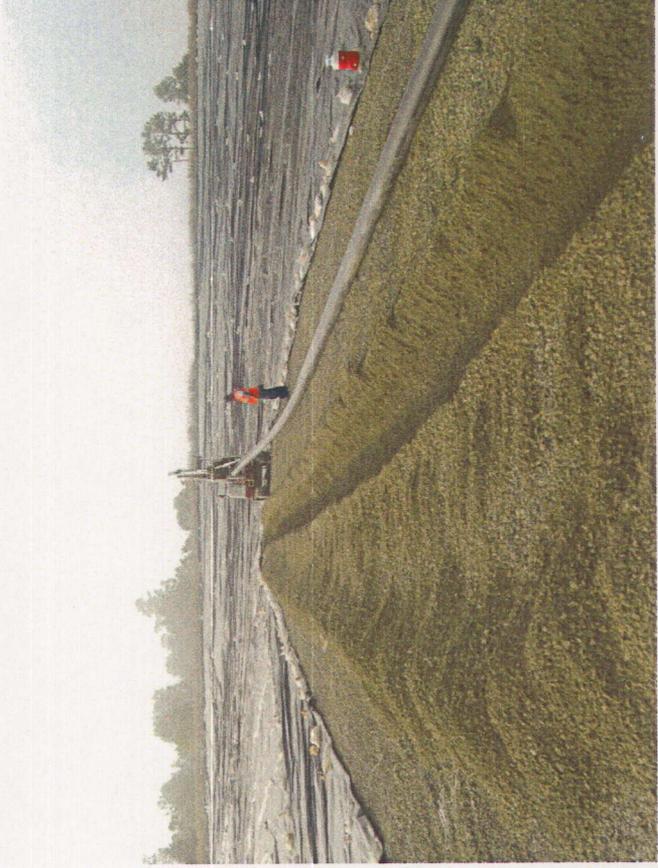
Excavation of East Trench



Excavation of East Trench



Welding 8" Perforated HDPE Pipe - East Line



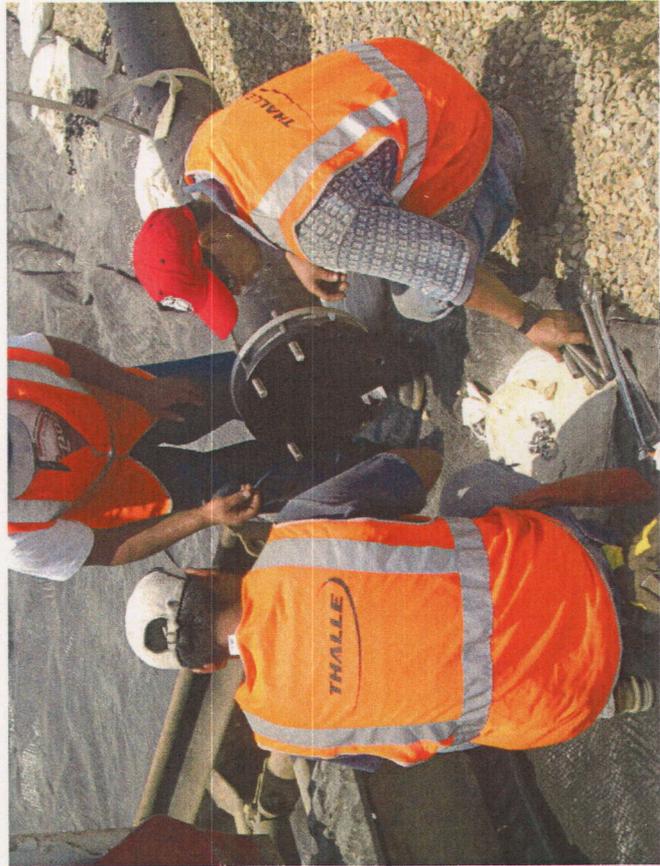
East Trench



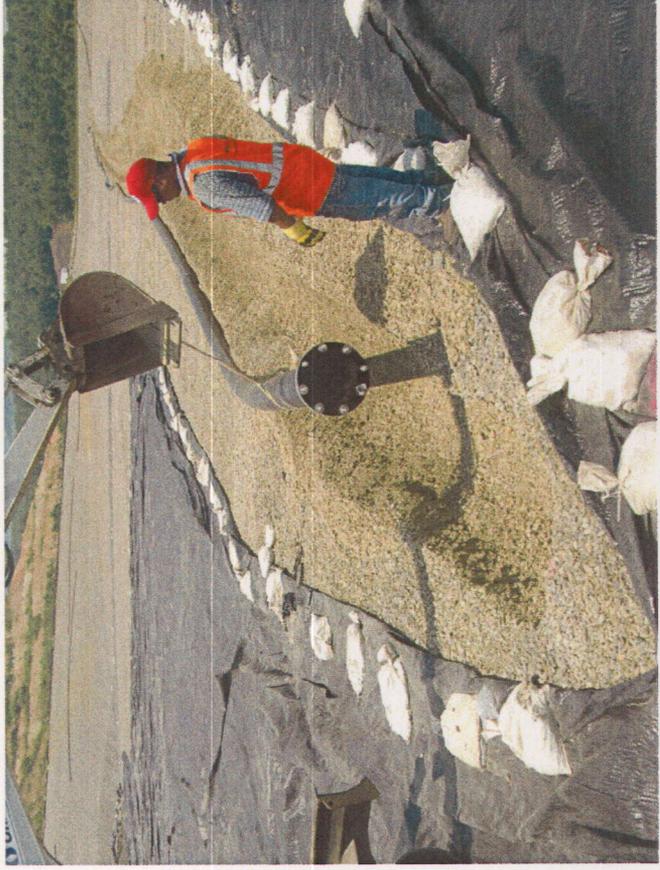
Welding 8" Perforated HDPE Pipe - East Line



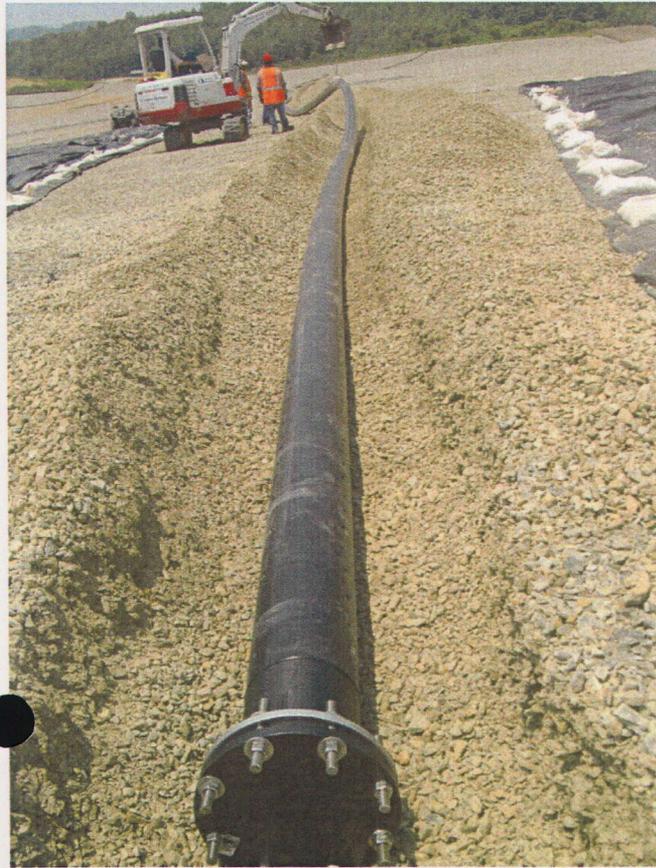
8" HDPE Blind Flange - East Line



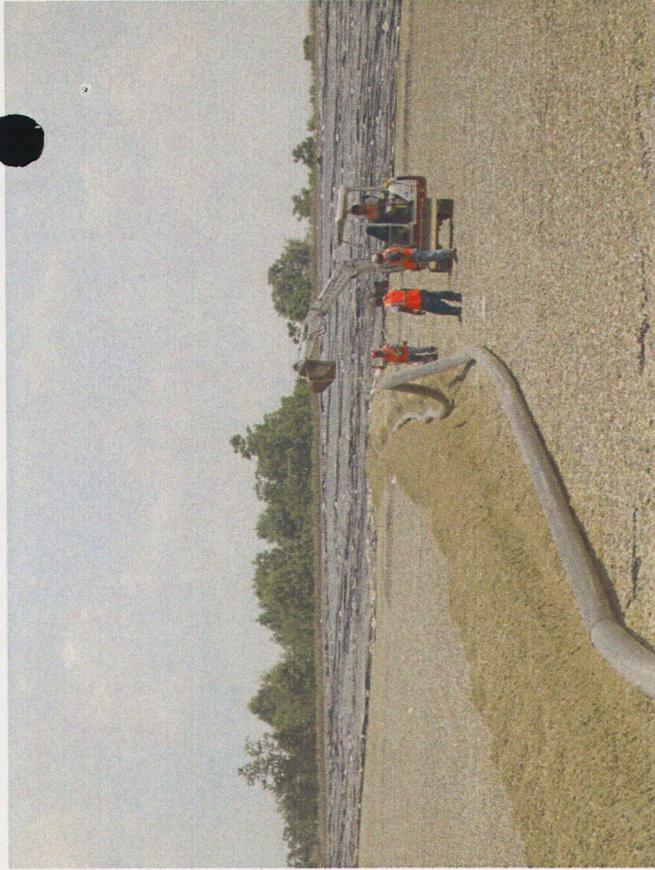
8" HDPE Blind Flange - East Line



Laying Gas Collection Pipe in East Trench



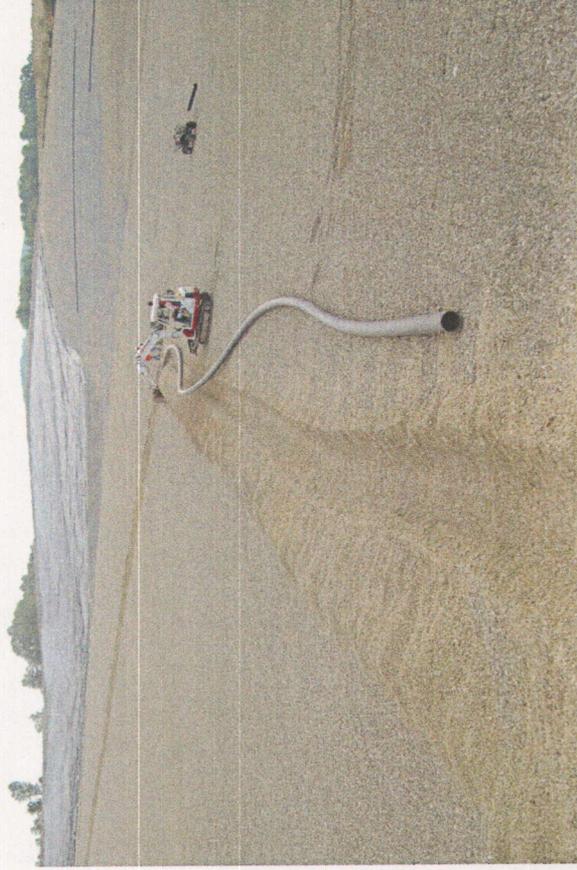
Laying Gas Collection Pipe in East Trench



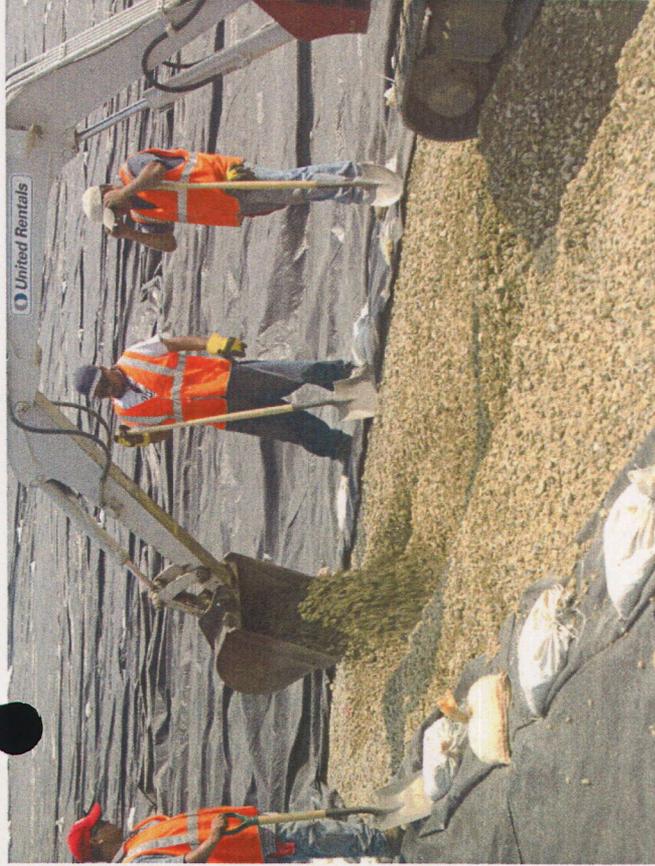
Laying Gas Collection Pipe in East Trench



Laying Gas Collection Pipe in East Trench



Laying Gas Collection Pipe in East Trench



Backfill of East Trench



Backfill of East Trench



Backfill of East Trench

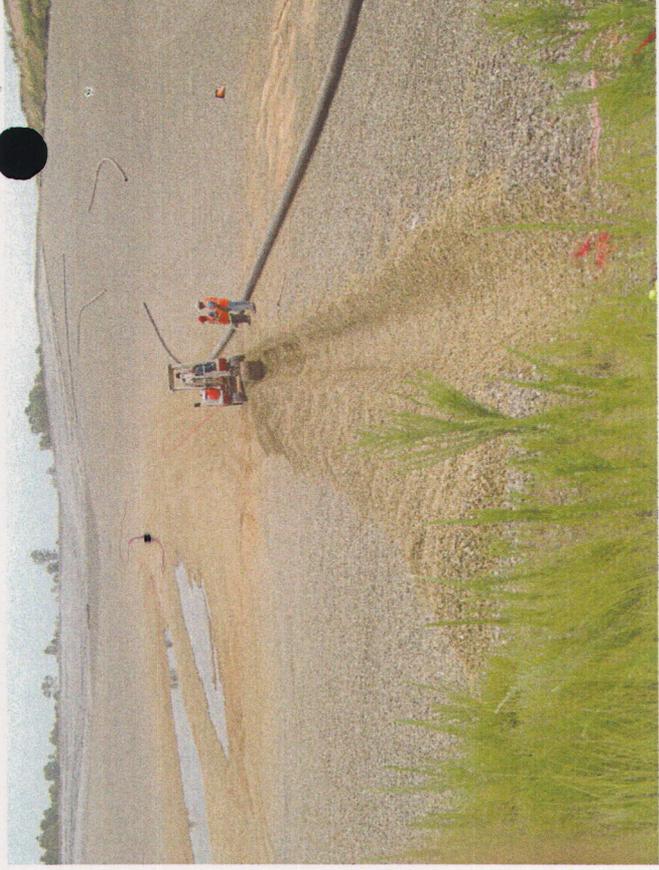
Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Quality Assurance Report  
Engineer: CDM  
Date: July 19, 2006

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

July 20, 2006



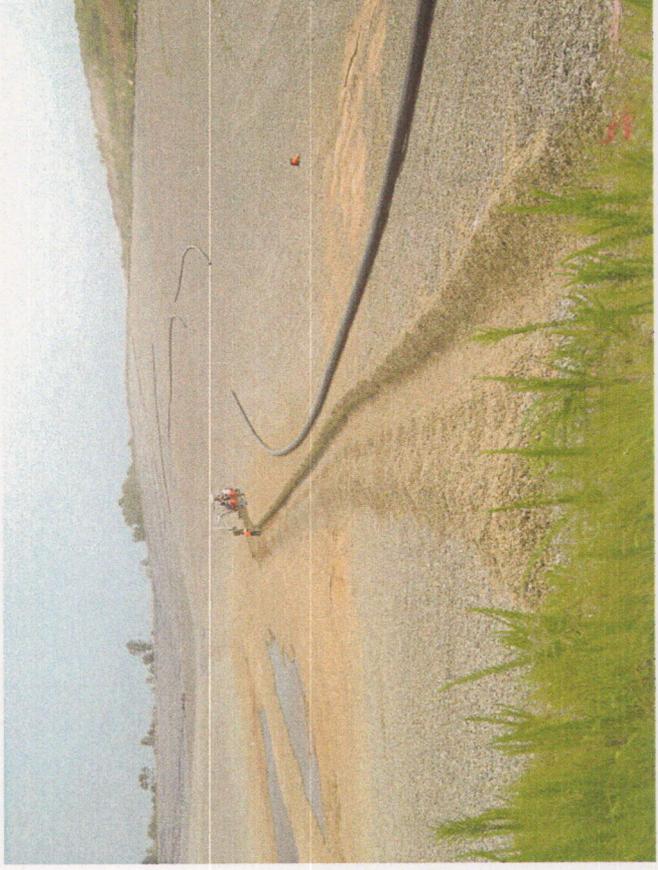
Excavation of West Trench



Excavation of West Trench



Excavation of West Trench



Excavation of West Trench



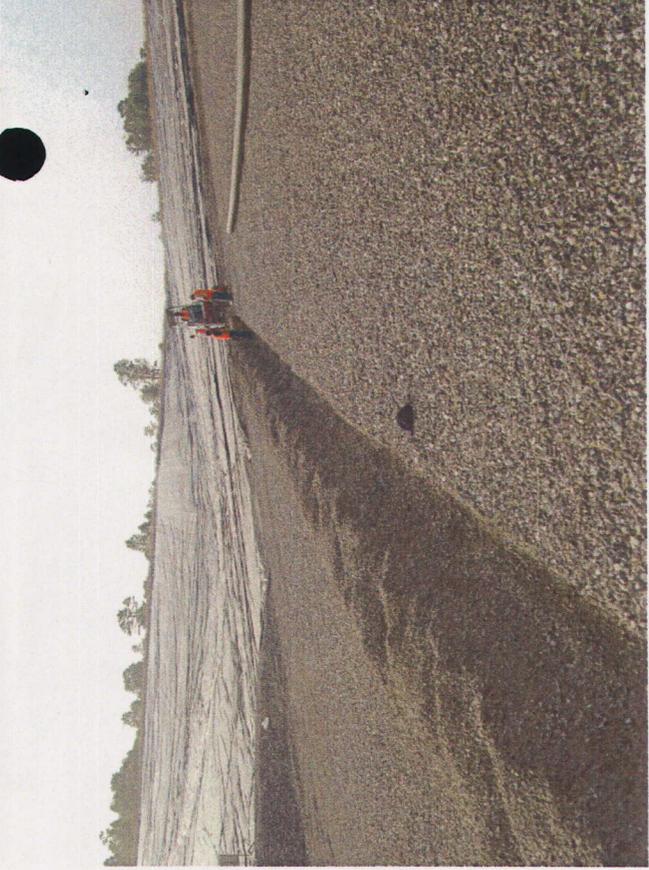
Excavation of West Trench

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

July 21, 2006



Excavation of West Trench



Excavation of West Trench



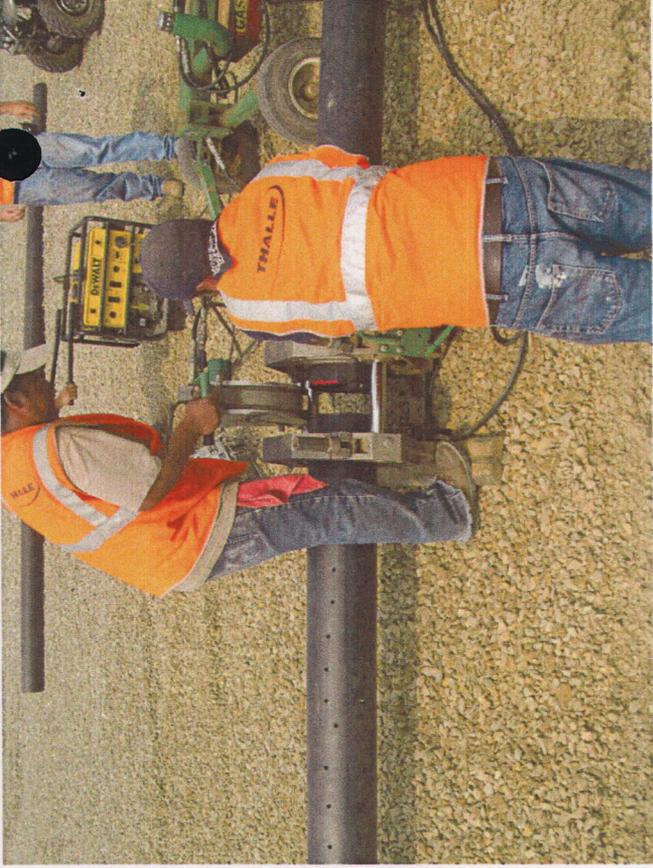
Excavation of West Trench



West Gas Collection Line



Welding 8" Perforated HDPE Pipe - West Line



Welding 8" Perforated HDPE Pipe - West Line



Welding 8" Perforated HDPE Pipe - West Line



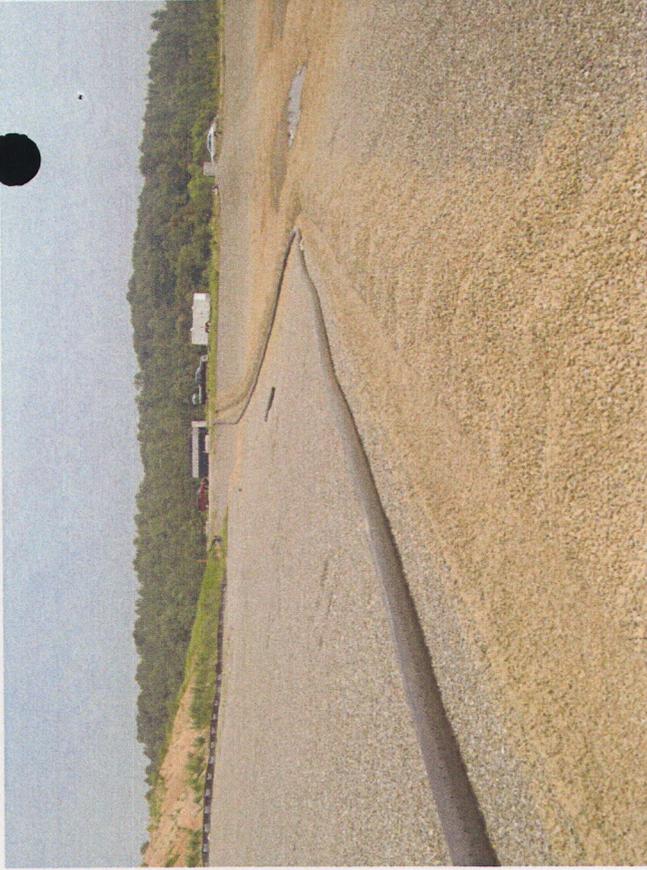
Blind Flange - West Line



Blind Flange - West Line



West Collection Line



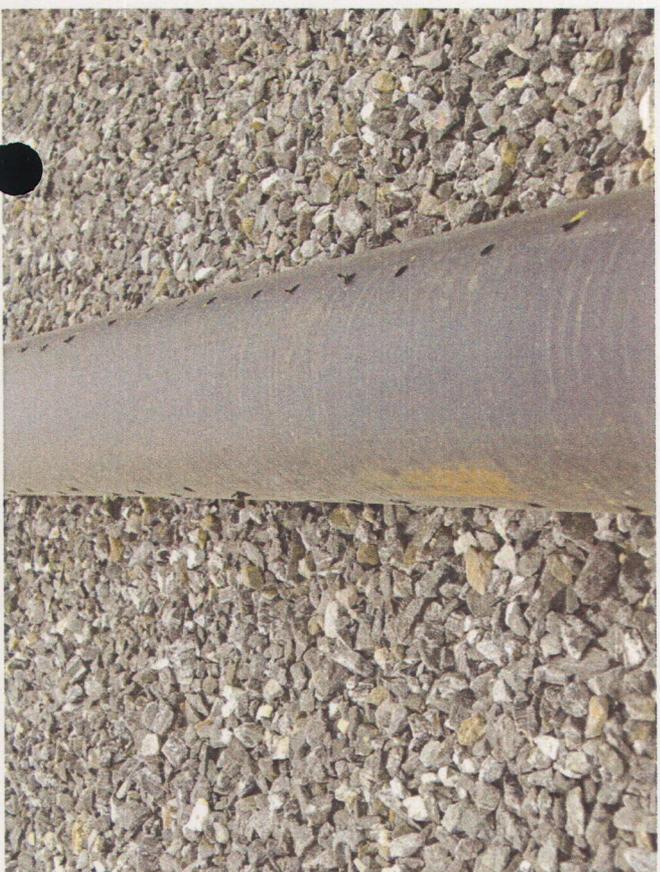
West Collection Line



West Collection Line



West Collection Line



Perforations



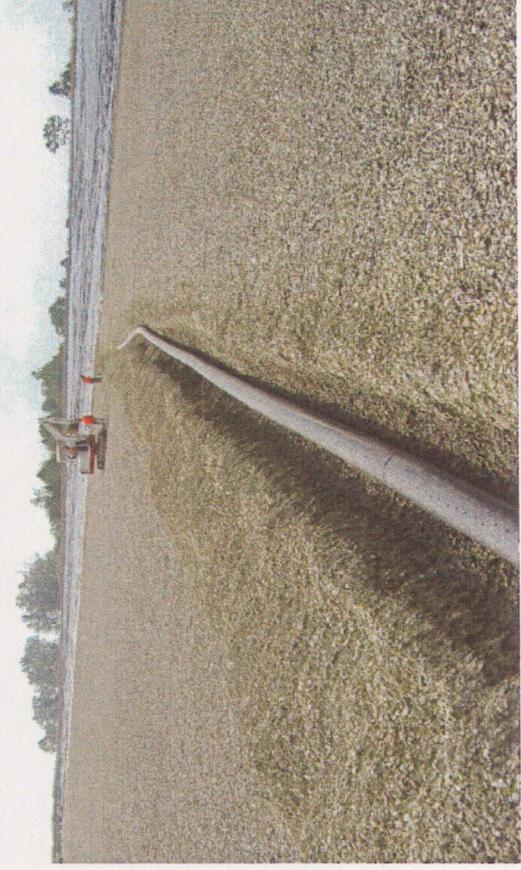
Perforations

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

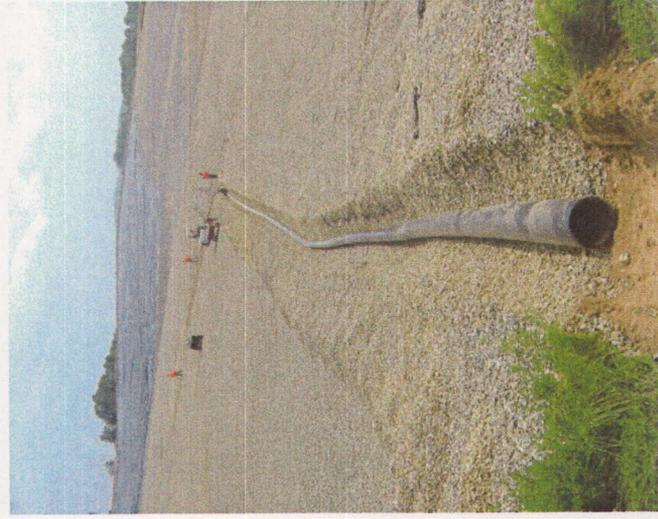
July 24, 2006



Backfill East Trench



Backfill East Trench



Backfill East Trench



Backfill East Trench



Backfill East Trench



West Line



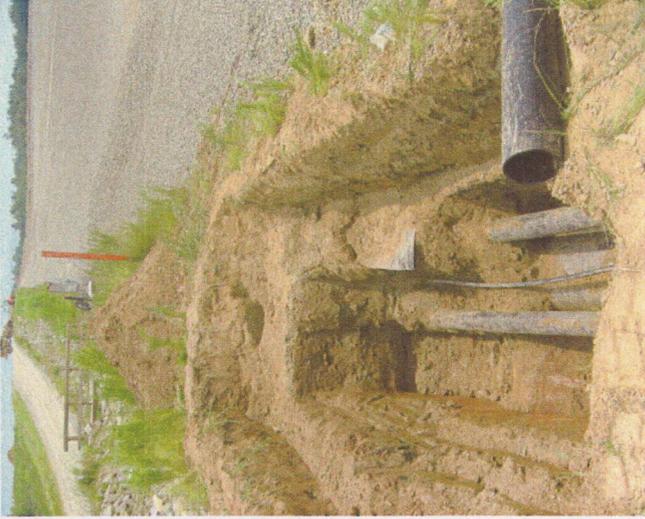
Blind Flange

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

July 25, 2006



Excavation of West Pit



Excavation of West Pit

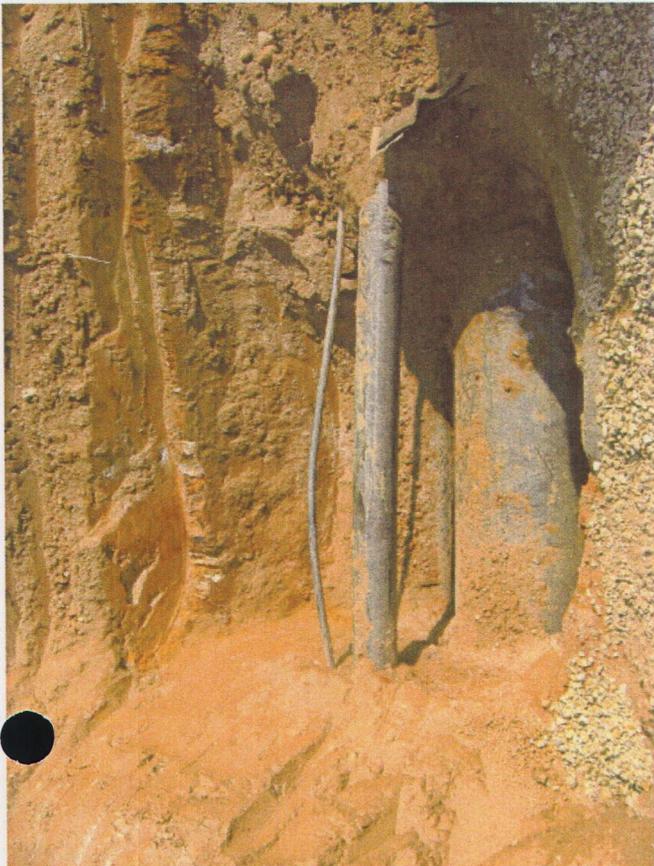


Excavation of West Pit

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Quality Assurance Report  
Engineer: CDM  
Date: July 25, 2006

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

July 27, 2006



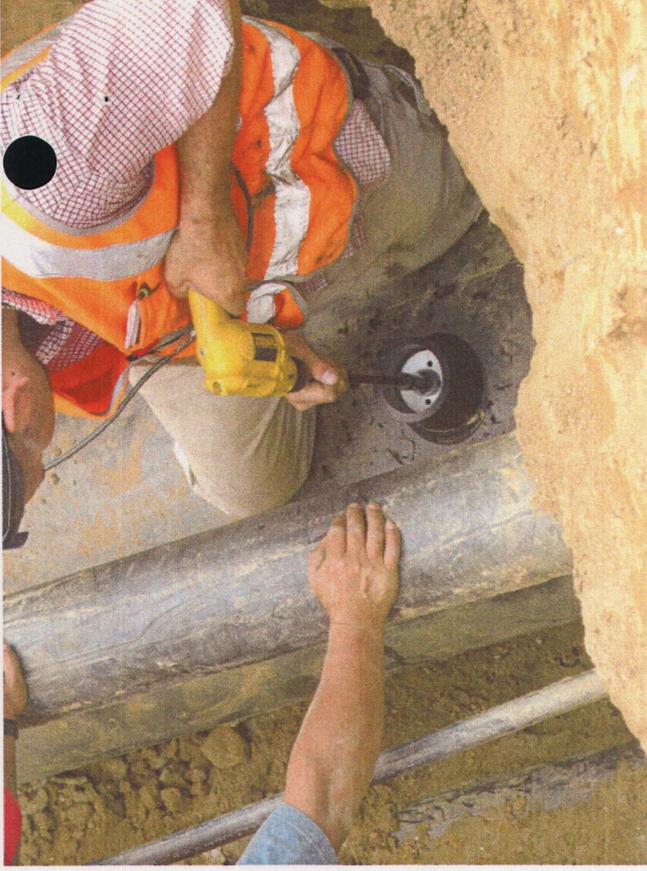
Excavation of West Pit

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

July 28, 2006



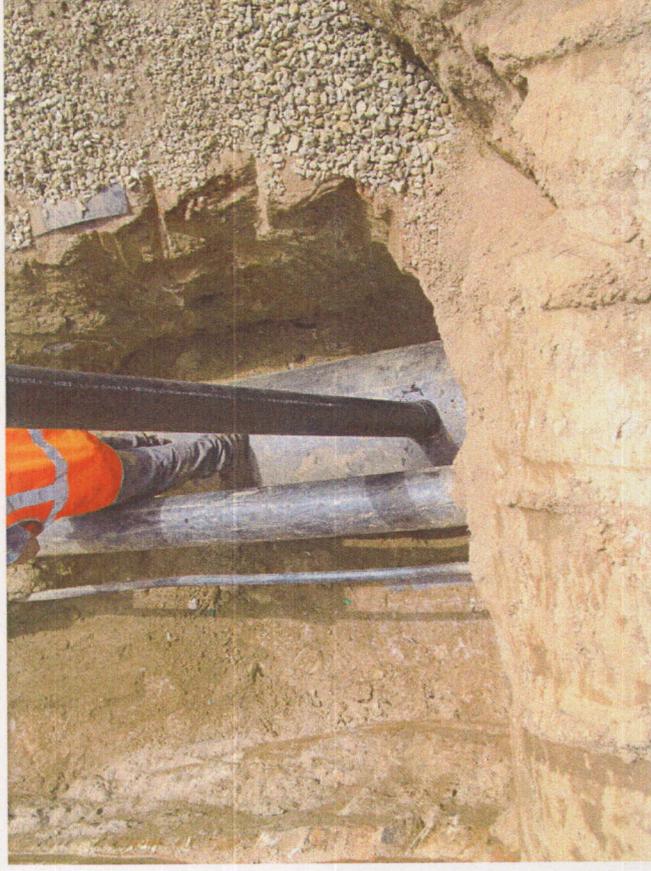
Existing HDPE Gas Header Pit - East Line



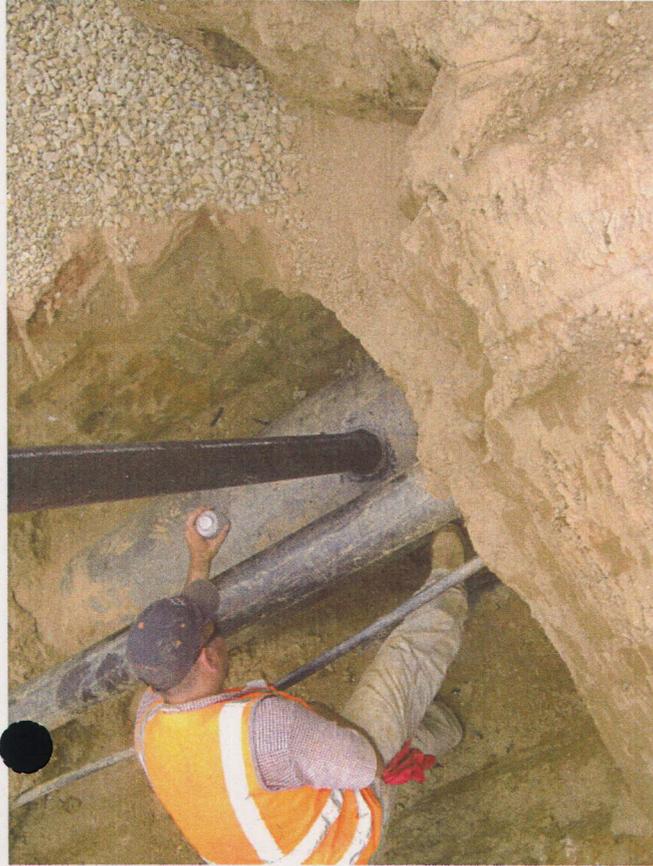
Tapping Existing 24-Inch HDPE Gas Header - East Line



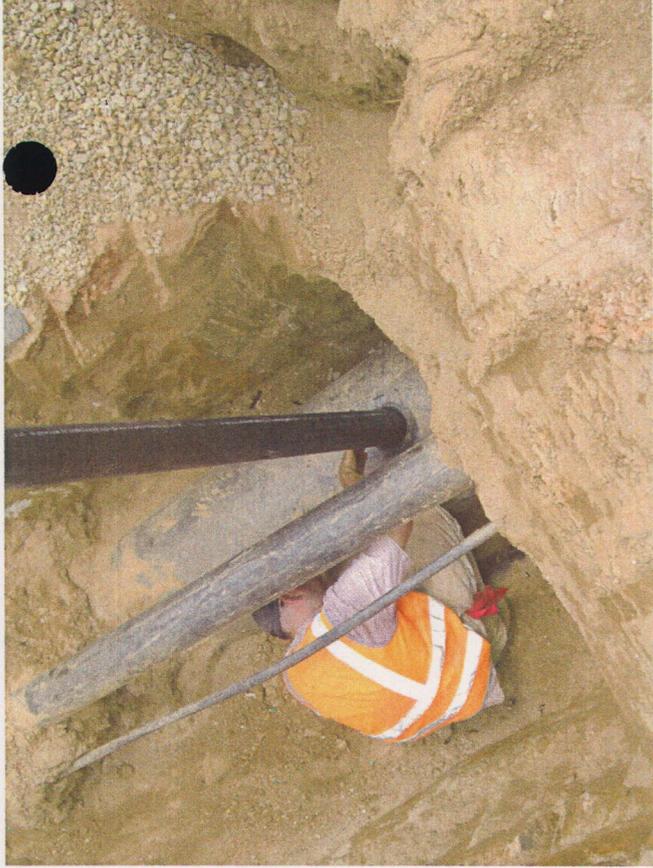
4-Inch HDPE Connection to HDPE Saddle - East Line



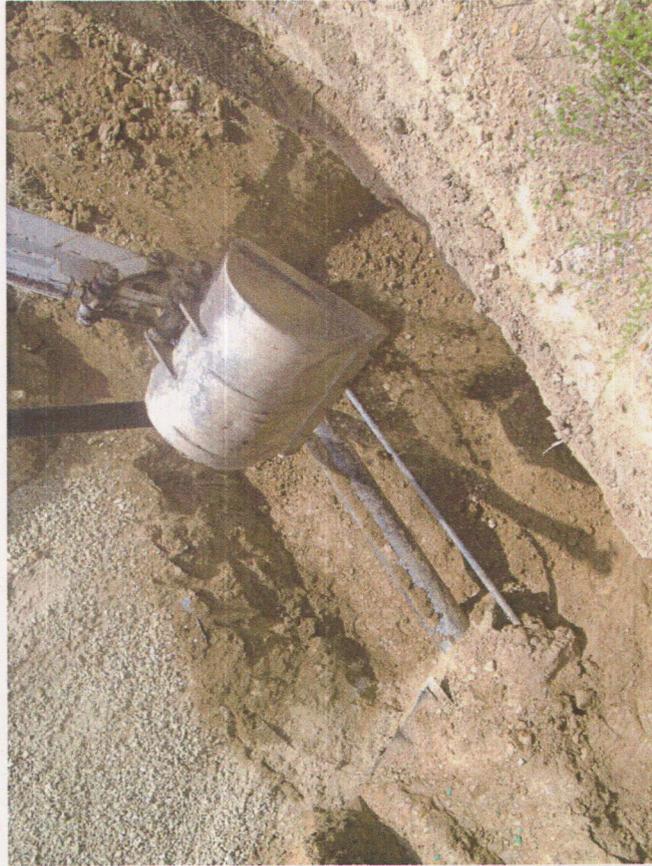
Completed Tie-In to Existing 24-Inch HDPE Gas Header - East Line



Leak Testing - East Line



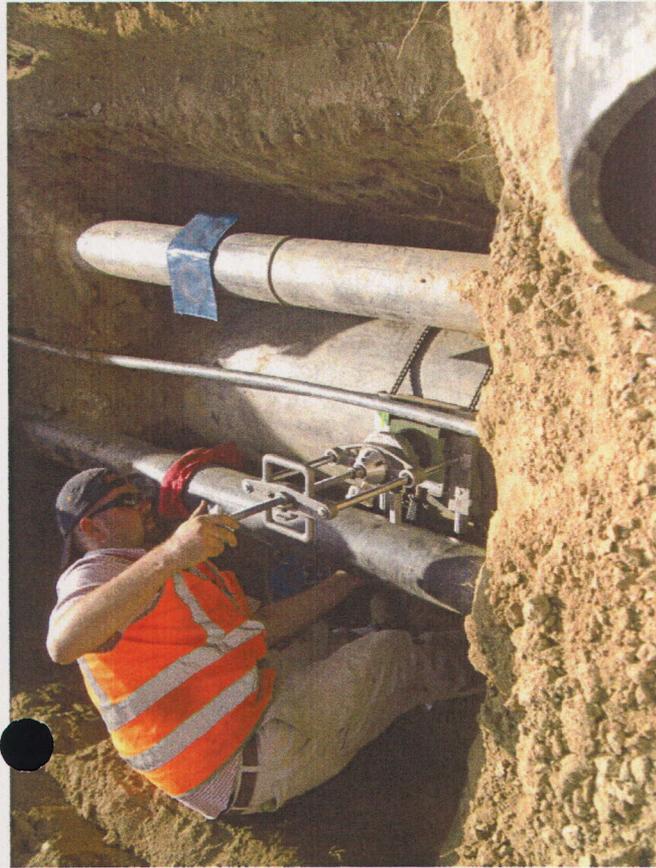
Leak Testing - East Line



Backfill of Gas Header Pit - East Line



Fusing HDPE Saddle to Existing 24-Inch Gas Header - West Line



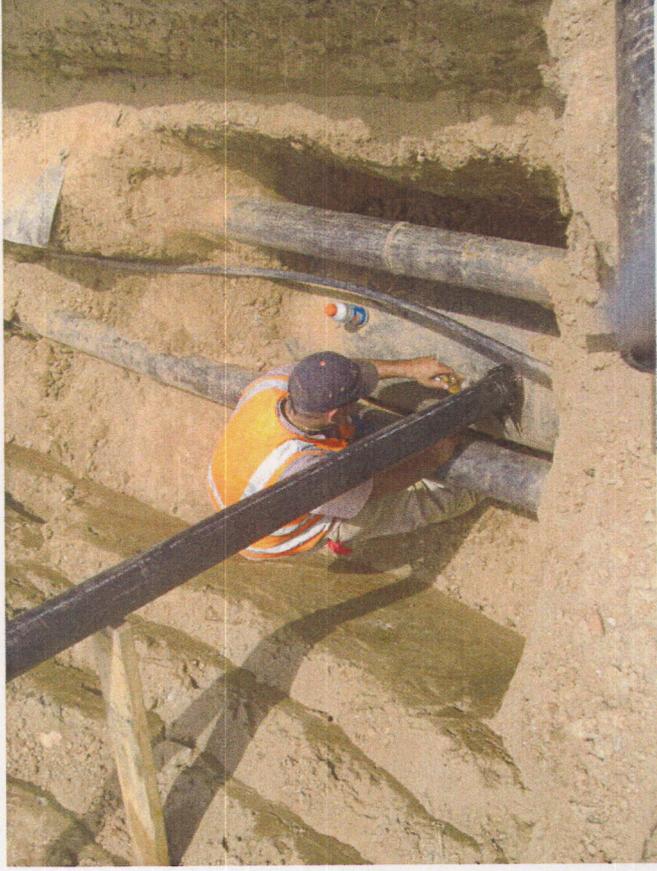
Fusing HDPE Saddle to Existing 24-Inch Gas Header - West Line



4-Inch HDPE Connection to HDPE Saddle - West Line



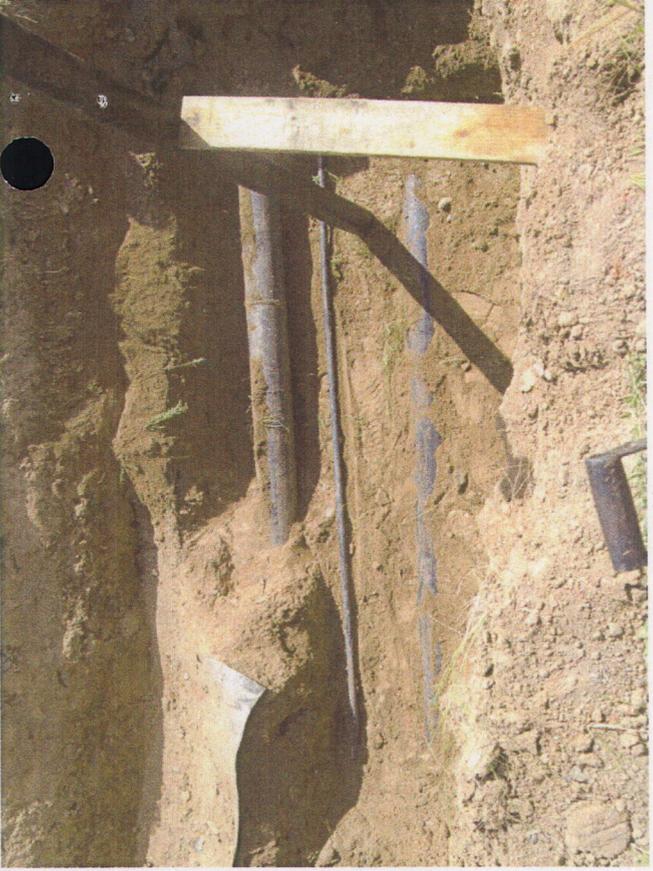
4-Inch HDPE Connection to HDPE Saddle - West Line



Leak Testing - West Line



Completed Tie-In to Existing 24-Inch HDPE Gas Header - West Line



Backfill of Gas Header Pit - West Line



Attaching FERNCO & PVC Ball Valve - West Line



FERNCO and PVC Ball Valve - East Line

Buncombe County Solid Waste Management Facility

Cell 6 Gas Installation

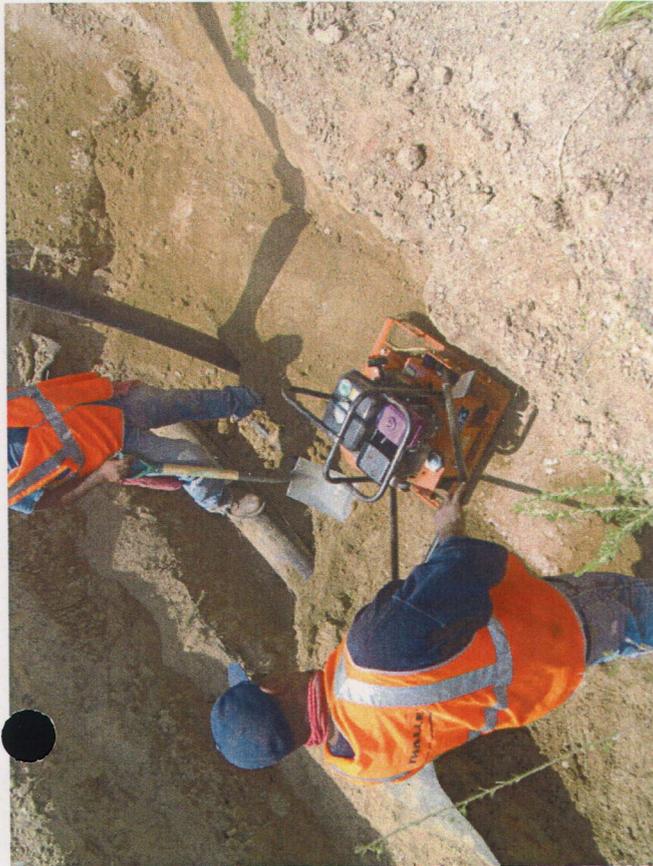
Construction Quality Assurance Report

Engineer: CDM

Date: July 28, 2006

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

July 31, 2006



Backfill of Gas Header Pit - West Line



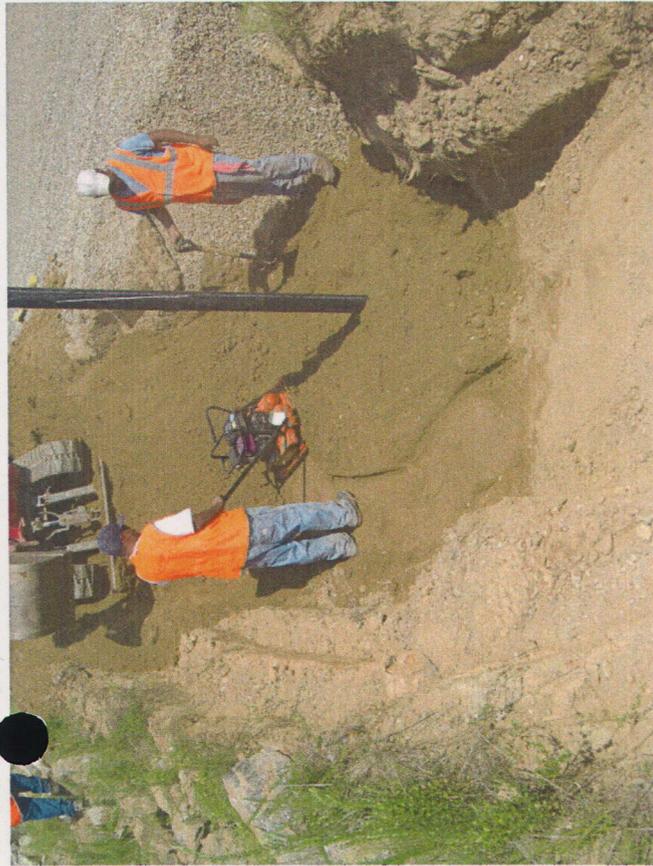
Backfill of Gas Header Pit - West Line



Backfill of Gas Header Pit - West Line



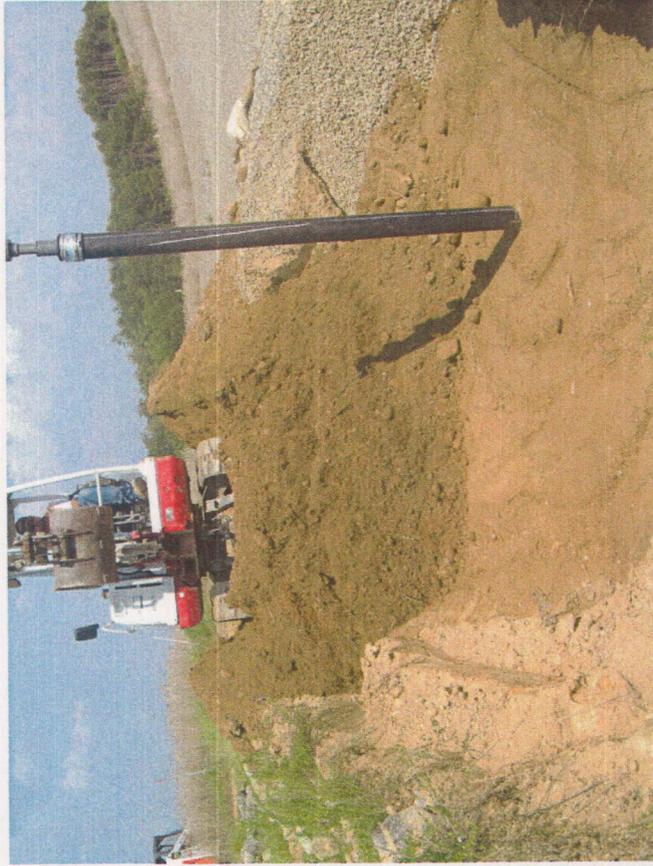
Backfill of Gas Header Pit - West Line



Backfill of Gas Header Pit - East Line



Backfill of Gas Header Pit - East Line



Backfill of Gas Header Pit - East Line

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Quality Assurance Report  
Engineer: CDM  
Date: July 31, 2006

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

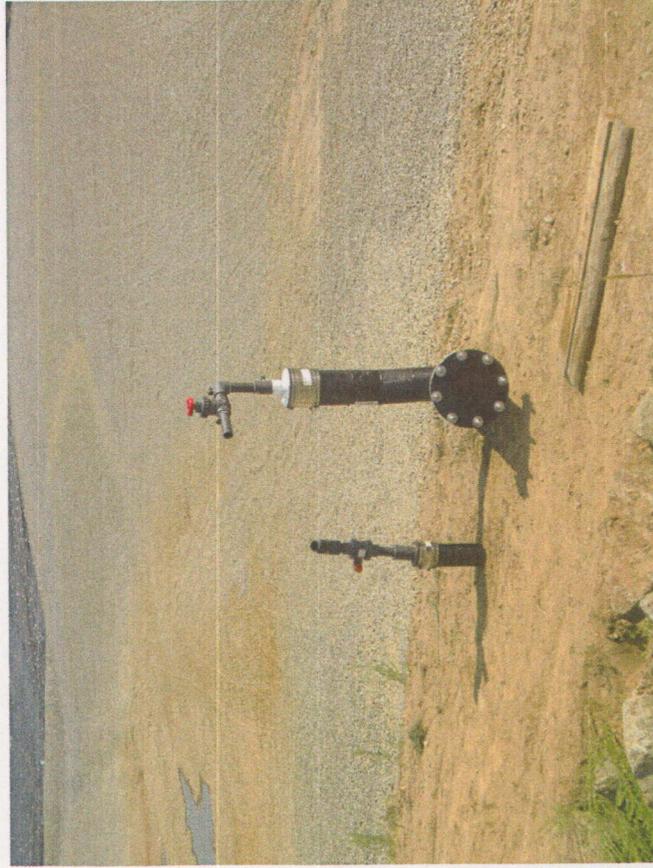
August 1, 2006



Fusing Wellhead Configuration - West Line



Jetclean - West Line

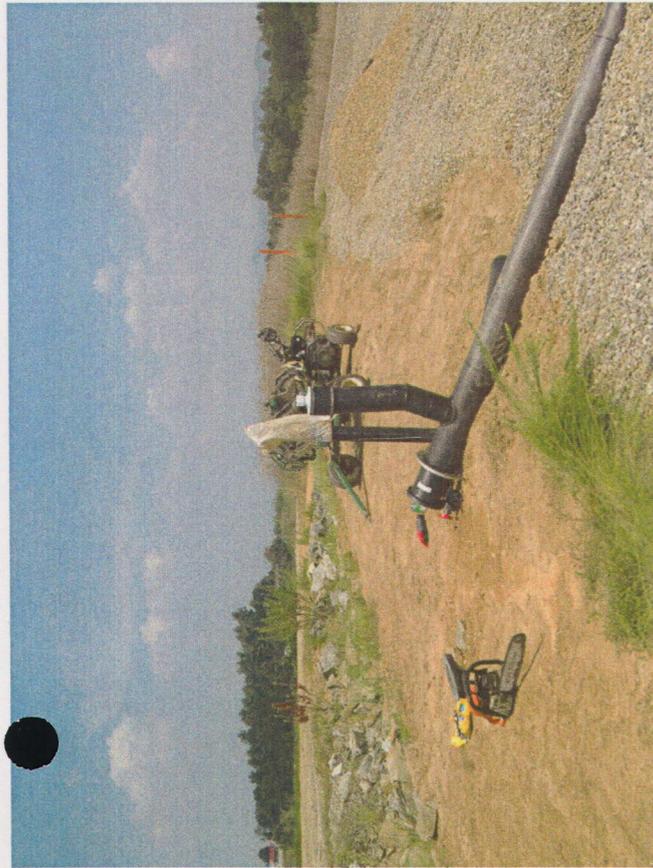


Wellhead Configuration - West Line

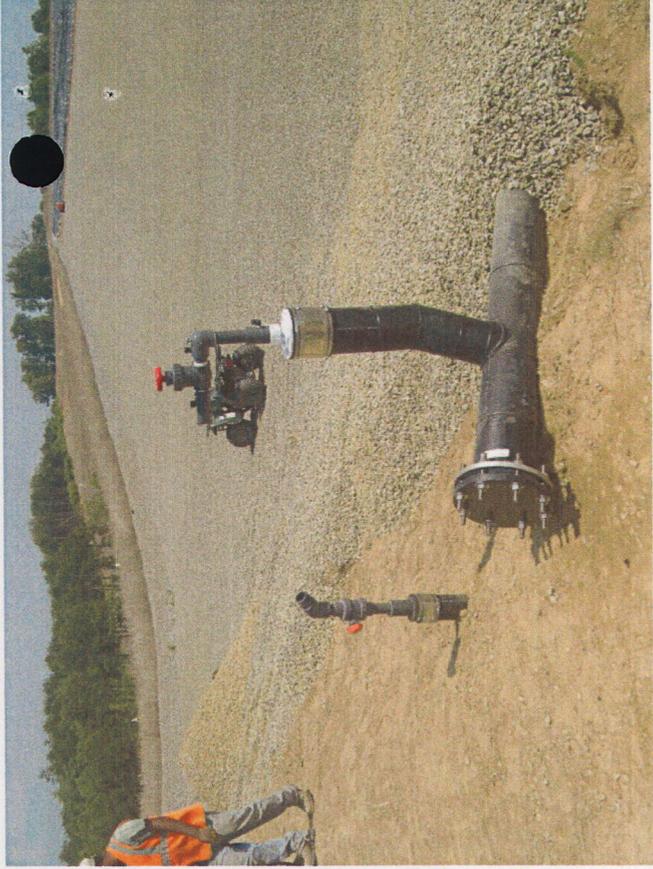


Jetclean - East Line

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Quality Assurance Report  
Engineer: CDM  
Date: August 1, 2006



Wellhead Configuration - East Line



Wellhead Configuration - East Line

Buncombe County Solid Waste Management Facility  
Cell 6 Gas Installation  
Construction Photographs

August 2, 2006



East Gas Collection Line: Gas - 6B



West Gas Collection Line: Gas - 6A