| Permit No. | Date | Document ID No. |
|---|---|---|
| **44-01** | **September 25, 2009** | **8666** |

ALTAMONT ENVIRONMENTAL, INC.
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***Transmitted via US Mail and email:***
*allen.gaither@ncdenr.gov*

September 23, 2009

Mr. Allen Gaither
Division of Waste Management
Solid Waste Section
Asheville Regional Office
2090 US Highway 70
Swannanoa, NC 28778

Subject: Landfill Gas Results
Closed Landfill Permit # 4401-INDUS-1979
International Paper Landfill 5
Canton, North Carolina

Dear Mr. Gaither:

This letter presents the results of preliminary landfill gas monitoring at the above referenced site. Altamont Environmental, Inc. (Altamont) installed 11 permanent landfill gas probes and four temporary landfill gas probes on the closed International Paper (IP) Landfill 5 during the week of September 9, 2009 in accordance with the Investigation Plan approved by the North Carolina Department of Environment and Natural Resources, Solid Waste Section (NCDENR SWS) on August 17, 2009. Probes were installed on both the Landfill 5B and 5C cells and along the property boundary. Altamont measured methane and carbon dioxide levels for all probes on September 14 through 16, 2009. Additionally, Altamont measured methane concentrations in ambient air around Landfill 5B and within buildings on Landfill 5B. The results are attached.

Altamont conducted landfill gas measurements for three days with two different monitoring meters to verify meter accuracy. All landfill gas probes, with the exception of the two wells that were not installed in landfill waste, had detections of methane that exceed the lower explosive limit (LEL) for methane of five percent by volume. None of the ambient air measurements had methane detections that exceeded 25% of the LEL. One ambient air measurement at location 29 had a detection of 0.8 % methane. A temporary fence was constructed around this location to prevent access. (Note: a temporary fence was also constructed around location 25 after landfill gas monitoring was conducted on July 15 and 16, 2009.) Please refer to Figures 1 and 2 for reference.

A Landfill Gas Mitigation Plan will be sent to NCDENR SWS within 60 days.

We recently became aware of the attached letter from James C. Coffey with NCDENR SWS to the Town of Canton, dated January 9, 2003 regarding the Landfill 5B International Paper Sports Complex. We are currently attempting to clarify with the Town of Canton the status of the various items noted in the letter.

Thank you for your time. Please feel free to call or respond with any questions or comments related to this project.

Sincerely,

**ALTAMONT ENVIRONMENTAL, INC.**

Paul Dow, P.E.

Enclosures: Landfill Gas Measurements
Figure 1
NCDENR SWS Letter dated January 9, 2003

Cc: Ms. Andrea Keller, NCDENR SWS Compliance
Mr. Tom Richardson, International Paper Company

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## Landfill Gas Measurements Field Worksheet

**Name of Person Taking Readings:** A. Bondurant **Date:** 9/14/2009
**Weather Conditions:** Cloudy **Ambient Temperature:** 78 °F
**Gas Monitoring Equipment:** GEM 2000 **Serial Number:** GM08260105 **Calibration Date:** 8/25/2009
**Atmospheric Pressure:** 27.28" Hg

### Gas Readings Field Worksheet

| Location | Readings | Time | % LEL | % $CH_4$ | % $CO_2$ | % $O_2$ | Notes |
|---|---|---|---|---|---|---|---|
| LF5B-LFG3 | Initial | 14:22 | > | 29.0 | 29.0 | 1.4 | Total well depth = 10.3' bgs |
| | Stable | 14:25 | > | 32.7 | 31.1 | 1.1 | Purge 40 sec. |
| LF5B-LFG1 | Initial | 14:31 | > | 33.6 | 24.0 | 8.7 | Total well depth = 15.5' bgs |
| | Stable | 14:34 | > | 51.4 | 38.3 | 2.8 | Purge 62 sec. |
| LF5B-LFG2 | Initial | 14:42 | > | 28.2 | 17.8 | 10.5 | Total well depth = 14.5' bgs |
| | Stable | 14:45 | > | 33.7 | 21.2 | 8.6 | Purge 58 sec. |
| LF5B-LFG4 | Initial | 14:53 | > | 42.2 | 20.9 | 8.2 | Total well depth = 14.5' bgs |
| | Stable | 14:55 | > | 52.0 | 24.4 | 5.0 | Purge 58 sec. |
| LF5B-LFG6 | Initial | 15:01 | 50 | 2.5 | 8.0 | 13.8 | Total well depth = 11.0' bgs |
| | Stable | 15:05 | 77 | 3.9 | 12.5 | 10.2 | Purge 44 sec. |
| LF5B-LFG5 | Initial | 15:08 | > | 13.2 | 12.2 | 15.3 | Total well depth = 10.5' bgs |
| | Stable | 15:11 | > | 45.6 | 42.9 | 2.9 | Purge 42 sec. |
| LF5C-LFG11 | Initial | 15:34 | > | 36.4 | 28.7 | 7.3 | Total well depth = 11.1' bgs |
| | Stable | 15:39 | > | 47.4 | 37.0 | 3.5 | Purge 44 sec. |
| LF5C-LFG10 | Initial | 15:59 | > | 39.2 | 32.9 | 1.5 | Total well depth = 11.5' bgs |
| | Stable | 16:02 | > | 39.1 | 33.1 | 0.5 | Purge 45 sec. |
| LF5C-LFG9 | Initial | 16:07 | > | 9.2 | 0.1 | 13.7 | Total well depth = 9.0' bgs |
| | Stable | 16:11 | > | 11.5 | 0.1 | 12.0 | Purge 36 sec. |
| LF5C-LFG8 | Initial | 16:14 | > | 31.9 | 21.4 | 9.6 | Total well depth = 11.5' bgs |
| | Stable | 16:16 | > | 36.6 | 24.9 | 7.9 | Purge 45 sec. |
| LF5C-LFG7 | Initial | 16:19 | > | 48.3 | 33.9 | 3.7 | Total well depth = 10.5' bgs |
| | Stable | 16:22 | > | 52.4 | 37.4 | 2.3 | Purge 41 sec. |
| LF5C-LFG12 | Initial | 16:29 | > | 47.8 | 31.9 | 4.7 | Total well depth = 12.5' bgs |
| | Stable | 16:32 | > | 55.0 | 35.9 | 2.2 | Purge 50 sec. |
| LF5C-LFG13 | Initial | 16:42 | 0 | 0.0 | 0.5 | 20.4 | Total well depth = 9.0' bgs |
| | Stable | 16:44 | 0 | 0.0 | 0.6 | 20.3 | Purge 36 sec. |
| LF5C-LFG14 | Initial | 16:35 | > | 56.1 | 9.1 | 5.5 | Total well depth = 11.5' bgs |
| | Stable | 16:38 | > | 64.8 | 10.5 | 3.4 | Purge 45 sec. |
| LF5C-LFG15 | Initial | 16:46 | 0 | 0.0 | 1.2 | 19.3 | Total well depth = 7.5' bgs |
| | Stable | 16:49 | 0 | 0.0 | 2.5 | 17.7 | Purge 36 sec. |

Notes: Stable readings were taken after 60 seconds. Locations numbered as LF5X-LFGX are landfill gas probes, all others are ambient air samples. Two volumes were purged from the landfill gas probes prior to stable readings. BGS means below ground surface.

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## Landfill Gas Measurements Field Worksheet

**Name of Person Taking Readings:** A. Saylor **Date:** 9/15/2009
**Weather Conditions:** Overcast Rainy **Ambient Temperature:** 71 °F
**Gas Monitoring Equipment:** GEM 2000 **Serial Number:** GM07614104 **Calibration Date:** 9/15/2009
**Atmospheric Pressure:** 27.78" Hg

### Gas Readings Field Worksheet

| Location | Readings | Time | % LEL | % $CH_4$ | % $CO_2$ | % $O_2$ | Notes |
|---|---|---|---|---|---|---|---|
| 15 | Initial | 17:12 | 0 | 0.0 | 0.1 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.0 | |
| 16 | Initial | 17:17 | 0 | 0.0 | 0.0 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.1 | |
| 35 | Initial | 17:22 | 0 | 0.0 | 0.0 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.1 | |
| 5 | Initial | 17:27 | 0 | 0.0 | 0.0 | 20.2 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.1 | |
| 7 | Initial | 17:31 | 0 | 0.0 | 0.0 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.3 | |
| 39 | Initial | 17:33 | 2 | 0.1 | 0.0 | 20.2 | New location: women's bathroom |
| | Stable | | 0 | 0.0 | 0.0 | 20.2 | back left corner |
| 8 | Initial | 17:36 | 0 | 0.0 | 0.0 | 20.3 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.2 | |
| LF5B-LFG6 | Initial | 17:50 | 17 | 0.8 | 2.8 | 17.9 | Purge 42 sec. |
| | Stable | | > | 6.1 | 20.7 | 4.4 | 0.0% CH4 ambient around well |
| LF5B-LFG5 | Initial | 18:01 | > | 8.6 | 6.6 | 17.1 | Purge 42 sec. |
| | Stable | | > | 47.0 | 42.7 | 1.8 | 0.0% CH4 ambient around well |
| LF5B-LFG4 | Initial | 18:16 | > | 36.0 | 16.7 | 9.4 | Purge 58 sec. |
| | Stable | | > | 21.4 | 9.6 | 13.7 | 0.0% CH4 ambient around well |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |

Notes: Atmospheric pressure data from Asheville Regional Airport. Stable readings were taken after 60 seconds. Locations numbered as LF5X-LFGX are landfill gas probes, all others are ambient air samples. Two volumes were purged from the landfill gas probes prior to stable readings.

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## Landfill Gas Measurements Field Worksheet

**Name of Person Taking Readings:** A. Saylor **Date:** 9/16/2009
**Weather Conditions:** Overcast Rainy **Ambient Temperature:** 70 °F
**Gas Monitoring Equipment:** GEM 2000 **Serial Number:** **Calibration Date:** GM07614104 9/15/2009
**Atmospheric Pressure:** 27.32" Hg

### Gas Readings Field Worksheet

| Location | Readings | Time | % LEL | % $CH_4$ | % $CO_2$ | % $O_2$ | Notes |
|---|---|---|---|---|---|---|---|
| 15 | Initial | 10:54 | 0 | 0.0 | 0.1 | 20.0 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.8 | |
| 16 | Initial | 10:58 | 0 | 0.0 | 0.0 | 20.0 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.8 | |
| 35 | Initial | 11:01 | 0 | 0.0 | 0.0 | 19.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.7 | |
| 8 | Initial | 11:07 | 0 | 0.0 | 0.0 | 19.9 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.8 | |
| 7 | Initial | 11:09 | 0 | 0.0 | 0.0 | 19.9 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.8 | |
| 39 | Initial | 11:10 | 0 | 0.0 | 0.0 | 19.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.8 | |
| 5 | Initial | 11:15 | 0 | 0.0 | 0.0 | 20.0 | |
| | Stable | | 0 | 0.0 | 0.0 | 19.9 | |
| LF5B-LFG2 | Initial | 13:53 | > | 48.3 | 33.8 | 3.4 | 0.1" of water pull on |
| | Stable | | > | 52.7 | 37.2 | 2.1 | manometer, purge 58 sec. |
| LF5B-LFG1 | Initial | 14:11 | > | 46.1 | 31.6 | 4.2 | No change in manometer |
| | Stable | | > | 11.9 | 8.4 | 16.0 | reading, purge 62 sec. |
| 31 | Initial | 14:22 | 0 | 0.0 | 0.2 | 19.9 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.1 | |
| 32 | Initial | 14:24 | 0 | 0.0 | 0.0 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.1 | |
| LF5B-LFG3 | Initial | 14:36 | > | 29.8 | 29.9 | 1.4 | <0.05" of water pull on |
| | Stable | | > | 32.9 | 32.6 | 0.5 | manometer, purge 40 sec. |
| 12 | Initial | 14:52 | 0 | 0.0 | 0.1 | 19.8 | Moved location to green grate, |
| | Stable | | 0 | 0.0 | 0.0 | 19.9 | previous location inaccessible |
| 13 | Initial | 14:59 | 0 | 0.0 | 0.8 | 20.2 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.1 | |
| 34 | Initial | 15:05 | 0 | 0.0 | 0.2 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.2 | |

Notes: Stable readings were taken after 60 seconds. Locations numbered as LF5X-LFGX are landfill gas probes, all others are ambient air samples. Two volumes were purged from the landfill gas probes prior to stable readings.

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## Landfill Gas Measurements Field Worksheet

**Name of Person Taking Readings:** A. Saylor **Date:** 9/16/2009
**Weather Conditions:** Overcast Rainy **Ambient Temperature:** 70 °F
**Gas Monitoring Equipment:** GEM 2000 **Serial Number:** **Calibration Date:** GM07614104 9/15/2009
**Atmospheric Pressure:** 27.32" Hg

### Gas Readings Field Worksheet

| Location | Readings | Time | % LEL | % $CH_4$ | % $CO_2$ | % $O_2$ | Notes |
|---|---|---|---|---|---|---|---|
| 33 | Initial | 15:09 | 0 | 0.0 | 0.0 | 20.3 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.3 | |
| 18 | Initial | 15:12 | 0 | 0.0 | 4.9 | 16.3 | |
| | Stable | | 0 | 0.0 | 4.7 | 16.4 | |
| 10 | Initial | 15:19 | 0 | 0.0 | 0.0 | 20.4 | Moved location to crack in red |
| | Stable | | 0 | 0.0 | 0.0 | 20.4 | MW, previous location inacces. |
| 9 | Initial | 15:22 | 0 | 0.0 | 0.3 | 20.0 | |
| | Stable | | 0 | 0.0 | 0.3 | 20.0 | |
| 30 | Initial | 15:25 | 0 | 0.0 | 0.0 | 20.5 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.4 | |
| 6 | Initial | 15:28 | 0 | 0.0 | 0.1 | 20.5 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.5 | |
| 11 | Initial | 15:33 | 0 | 0.0 | 3.0 | 17.8 | Moved location to blue water |
| | Stable | | 0 | 0.0 | 3.0 | 17.7 | vault, previous location inacces. |
| 36 | Initial | 15:43 | 0 | 0.0 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| 37 | Initial | 15:45 | 0 | 0.0 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| 17 | Initial | 15:48 | 0 | 0.0 | 0.6 | 20.1 | |
| | Stable | | 0 | 0.0 | 0.6 | 20.0 | |
| 14 | Initial | 15:50 | 0 | 0.0 | 0.0 | 20.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.6 | |
| 1 | Initial | 15:53 | 0 | 0.0 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| 29 | Initial | 15:57 | 16 | 0.8 | 0.1 | 20.7 | |
| | Stable | | 2 | 0.1 | 0.2 | 20.6 | |
| 28 | Initial | 16:00 | 0 | 0.0 | 0.0 | 20.6 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.6 | |
| 2 | Initial | 16:09 | 0 | 0.0 | 0.0 | 20.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |

Notes: Stable readings were taken after 60 seconds. Locations numbered as LF5X-LFGX are landfill gas probes, all others are ambient air samples. Two volumes were purged from the landfill gas probes prior to stable readings.



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## Landfill Gas Measurements Field Worksheet

**Name of Person Taking Readings:** A. Saylor **Date:** 9/16/2009
**Weather Conditions:** Overcast Rainy **Ambient Temperature:** 70 °F
**Gas Monitoring Equipment:** GEM 2000 **Serial Number:** **Calibration Date:** GM07614104 9/15/2009
**Atmospheric Pressure:** 27.36" Hg

### Gas Readings Field Worksheet

| Location | Readings | Time | % LEL | % $CH_4$ | % $CO_2$ | % $O_2$ | Notes |
|---|---|---|---|---|---|---|---|
| 3 | Initial | 16:12 | 0 | 0.0 | 0.0 | 20.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.8 | |
| 25 | Initial | 16:18 | 0 | 0.0 | 0.0 | 20.8 | Sample taken from four fence |
| | Stable | | 0 | 0.0 | 0.0 | 20.8 | posts adjacent to fenced off inlet |
| 4 | Initial | 16:24 | 0 | 0.0 | 0.0 | 20.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.8 | |
| 24 | Initial | 16:26 | 0 | 0.0 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.8 | |
| 26 | Initial | 16:27 | 0 | 0.0 | 0.0 | 20.6 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| 27 | Initial | 16:29 | 0 | 0.0 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.8 | |
| LF5B-LFG5 | Initial | 16:43 | > | 29.9 | 27.8 | 8.6 | 0.0" of water pull on |
| | Stable | | > | 45.3 | 41.3 | 2.5 | manometer, purge 42 sec. |
| 23 | Initial | 16:54 | 2 | 0.1 | 0.1 | 20.4 | |
| | Stable | | 2 | 0.1 | 0.0 | 20.5 | |
| 22 | Initial | 16:56 | 0 | 0.0 | 0.0 | 20.6 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| 21 | Initial | 16:59 | 0 | 0.0 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| 20 | Initial | 17:02 | 0 | 0.0 | 0.0 | 20.8 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| LF5B-LFG6 | Initial | 17:12 | 76 | 3.8 | 12.8 | 10.8 | 0.0" of water pull on |
| | Stable | | > | 6.2 | 22.4 | 3.9 | manometer, purge 44 sec. |
| 19 | Initial | 17:19 | 0 | 0.0 | 0.1 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.7 | |
| LF5B-LFG4 | Initial | 17:26 | > | 33.7 | 14.9 | 10.0 | Needs valve cap, 0.0" of water |
| | Stable | | > | 36.1 | 15.7 | 9.3 | pull on manometer, purge 58 sec. |
| 38 | Initial | 17:41 | 2 | 0.1 | 0.0 | 20.7 | |
| | Stable | | 0 | 0.0 | 0.0 | 20.8 | |

Notes: Stable readings were taken after 60 seconds. Locations numbered as LF5X-LFGX are landfill gas probes, all others are ambient air samples. Two volumes were purged from the landfill gas probes prior to stable readings.

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## Landfill Gas Measurements Field Worksheet

**Name of Person Taking Readings:** A. Saylor **Date:** 9/16/2009
**Weather Conditions:** Overcast Rainy **Ambient Temperature:** 70 °F
**Gas Monitoring Equipment:** GEM 2000 **Serial Number:** **Calibration Date:** GM07614104 9/15/2009
**Atmospheric Pressure:** 27.28" Hg

### Gas Readings Field Worksheet

| Location | Readings | Time | % LEL | % $CH_4$ | % $CO_2$ | % $O_2$ | Notes |
|---|---|---|---|---|---|---|---|
| LF5C-LFG7 | Initial | 17:49 | > | 50.8 | 37.6 | 1.8 | 0.0" of water pull on |
| | Stable | | > | 53.3 | 38.9 | 0.9 | manometer, purge 41 sec. |
| LF5C-LFG8 | Initial | 17:59 | > | 52.2 | 38.2 | 2.0 | 0.0" of water pull on |
| | Stable | | > | 54.6 | 38.3 | 1.1 | manometer, purge 45 sec. |
| LF5C-LFG9 | Initial | 18:08 | > | 12.1 | 0.2 | 9.8 | 0.0" of water pull on |
| | Stable | | > | 13.1 | 0.2 | 8.8 | manometer, purge 36 sec. |
| LF5C-LFG15 | Initial | 18:17 | 0 | 0.0 | 2.6 | 17.8 | Temporary well, no valve cap |
| | Stable | | 0 | 0.0 | 3.3 | 17.0 | purge 36 sec. |
| LF5C-LFG13 | Initial | 18:27 | 0 | 0.0 | 0.2 | 20.5 | Temporary well, no valve cap |
| | Stable | | 0 | 0.0 | 0.7 | 20.2 | purge 36 sec. |
| LF5C-LFG12 | Initial | 18:35 | > | 36.1 | 24.5 | 7.8 | Temporary well, no valve cap |
| | Stable | | > | 58.1 | 39.0 | 0.7 | purge 50 sec. |
| LF5C-LFG11 | Initial | 18:48 | > | 41.2 | 39.4 | 4.4 | 0.0" of water pull on |
| | Stable | | > | 47.1 | 39.7 | 2.5 | manometer, purge 44 sec. |
| LF5C-LFG10 | Initial | 18:58 | > | 35.8 | 31.4 | 2.6 | 0.0" of water pull on |
| | Stable | | > | 39.1 | 34.5 | 1.4 | manomter, purge 45 sec. |
| LF5C-LFG14 | Initial | 19:04 | > | 47.5 | 9.3 | 6.1 | Temporary well, no valve cap |
| | Stable | | > | 61.4 | 11.6 | 1.8 | purge 45 sec. |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |
| | Initial | | | | | | |
| | Stable | | | | | | |

Notes: Stable readings were taken after 60 seconds. Locations numbered as LF5X-LFGX are landfill gas probes, all others are ambient air samples. Two volumes were purged from the landfill gas probes prior to stable readings. A change in atmospheric pressure was noted at beginning of data sheet.

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LEGEND

- Ambient Air-Methane Detection
- Ambient Air-No Methane Detection
- LFG Probe-Methane Exceedence
- LFG Probe-No Methane Exceedence
- LF 5 Parcel Boundary

SOURCE:

HAYWOOD COUNTY
2008 COLOR ORTHOPHOTO

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| REV. | DATE | DESCRIPTION | BY | CHK | APV |
|---|---|---|---|---|---|

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DRAWN BY: ANNA SAYLOR
PROJECT MANAGER: JOEL LENK
CLIENT: INTERNATIONAL PAPER CO.
DATE: 09/23/2009

SCALE
0 90 180 360 Feet

# LANDFILL GAS INVESTIGATION
SEPTEMBER 14-16, 2009

LANDFILL 5 # 4401
CLOSED INTERNATIONAL PAPER LANDFILL
CANTON, NORTH CAROLINA

FIGURE
1

P:\IP\LF 5\Landfill Gas Investigation\Figures\LF5B landfill gas screening locations 11x17.mxd

North Carolina
Department of Environment and Natural Resources

Division of Waste Management

**Michael F. Easley, Governor**
**William G. Ross Jr., Secretary**
**Dexter R. Matthews, Director**

NCDENR

January 9, 2003

Bill Stamey, Manager
Town Of Canton
PO Box 987
Canton, North Carolina 28716

RE: Proposed International Paper Recreational Park in Canton, North Carolina

Dear Mr. Stamey:

The Solid Waste Section (the Section) has received the Preliminary Site Plan for the Proposed Athletic Facility on the closed International Paper Landfill Site (Landfill No. 5B) prepared on your behalf by McGill Associates (letters dated 5 September and 4 December 2002 with Site Plan drawing dated October 2002). Based on the preliminary plans, six softball fields, two tee ball fields, a Recreational Center, parking areas, and a walking trail appear to be atop the old Landfill No.5B. The four soccer fields, picnic area, restroom facility, additional parking area, and concession shelter on the east side of the property appear to be atop the old borrow area for Landfill No. 5B while the youth soccer field and additional picnic area to the south appear to be in the buffer area or flood plain of Beaverdam Creek.

Based on the submitted information, the concept of a proposed athletic facility appears feasible and constructable. However, certain details need to be addressed before the Section can approve the post-closure use of Landfill No. 5B as proposed. The Section would like to see a more detailed plan that would address the following:

- Any construction atop the old landfill must not adversely effect the landfill cap, including building foundations, light or other pole structures, fencing installation, bleachers, etc.

- Methane gas is a by-product of organic material decomposition that normally occurs in landfills. This gas is explosive in concentrations of 5% to 15% of ambient air. Therefore, strict monitoring of methane levels in buildings and structures on and adjacent to the site and at property boundaries is considered an integral part of landfill post closure care. Methane monitoring is especially important for a publically used facility.

- No proposed construction or facility feature should involve penetrations through the cap that would allow a pathway for methane to escape and accumulate.

- Development within the flood plain of Beaverdam Creek should not adversely effect any wetlands.

Please submit detailed plans of the proposed facility to the Section for review once they have been developed. Be sure to include considerations for monitoring methane in structures on properties adjacent to the landfill such as the ASL Acquisition Corporation property to the north and residential properties on the west side of the landfill.

If you have any questions about this letter or would like to discuss proposed details, please feel free to contact Tim Jewett, Western Area Engineer, at 336-771-4608, ext.204.

Sincerely,

James C. Coffey

James C. Coffey
Section Chief
Solid Waste Section

cc: Brent Rockett, SWS
Jim Patterson, SWS
Tim Jewett, SWS
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LuAnn Bryan, ARO Parks and Recreation
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