

**City of Palo Alto Landfill**

**TITLE V SEMI-ANNUAL MONITORING REPORT**

|  |   |
|--|---|
| <b>Site:</b> City of Palo Alto Landfill                      | <b>Facility ID#:</b> A2721                                |
| <b>Permitted Unit:</b> S-5 Wood Grinder and A-5 Water Sprays | <b>Reporting Period:</b> from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria                      | Monitoring Requirement Citation  | Monitoring Type  | Monitoring Frequency                 | Citation of Limit              | Limit  | Compliance | Corrective Actions Taken |
|--|----------------------------------|--|--------------------------------------|--------------------------------|--|------------|--------------------------|
| Periods of Inoperation for Parametric Monitors | BAAQMD 1-523.4                   | Operating records for all parametric monitors (gas flow meters and temperature monitors) | Periodic/<br>Daily                   | BAAQMD 1-523.2                 | ≤ 15 consecutive days per incident and ≤ 30 calendar days per 12 month period  | Continuous | N/A                      |
| Opacity  | BAAQMD Condition #1028, Part 17d | Records of all site watering and road cleaning events                                    | Periodic/<br>Event basis/<br>Monthly | BAAQMD 6-1-301 and SIP 6-301   | Ringelmann No. 1 for < 3 minutes in any hour (applies to S-1)  | Continuous | N/A                      |
| Opacity  | None                             | NA   | None                                 | BAAQMD 6-1-301 and SIP 6-310   | Ringelmann No. 1 for < 3 minutes in any hour (applies to flare)  | Continuous | N/A                      |
| FP   | None                             | NA   | None                                 | BAAQMD 6-1-310 and SIP 6-310   | ≤ 0.15 grains/dscf (applies to flare)  | Continuous | N/A                      |
| Total Carbon                                   | BAAQMD Condition #1028, Part 3   | Surface VOC Analysis and Records   | Periodic/<br>Event basis             | BAAQMD 8-2-301 and SIP 8-2-301 | ≤ 15 pounds per day or ≤ 300 ppmv, dry basis (applies only to aeration of or use as cover soil of soil containing ≤ 50 ppmw of volatile organic compounds) | Continuous | N/A                      |
| Collection and Control Systems Shutdown Time   | BAAQMD 8-34-501.1                | Operating Records  | Periodic/<br>Event basis             | BAAQMD 8-34-113.2              | ≤ 240 hours per year and ≤ 5 consecutive days  | Continuous | N/A                      |
| Well Shutdown Limits                           | BAAQMD 8-34-116.5 and 501.1      | Records  | Periodic/<br>Daily                   | BAAQMD 8-34-116.2              | No more than 5 wells at a time or <10% of total collection system, whichever is less   | Continuous | N/A                      |
| Well Shutdown Limits                           | BAAQMD 8-34-116.5 and 501.1      | Records  | Periodic/<br>Daily                   | BAAQMD 8-34-116.3              | ≤ 24 hours per well  | Continuous | N/A                      |

City of Palo Alto Landfill

TITLE V SEMI-ANNUAL MONITORING REPORT

|                 |                                       |                   |                                  |
|-----------------|---------------------------------------|-------------------|----------------------------------|
| Site:           | City of Palo Alto Landfill            | Facility ID#:     | A2721                            |
| Permitted Unit: | S-5 Wood Grinder and A-5 Water Sprays | Reporting Period: | from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria                  | Monitoring Requirement Citation   | Monitoring Type   | Monitoring Frequency                             | Citation of Limit           | Limit  | Compliance | Corrective Actions Taken |
|--|---|---|--|-----------------------------|--|------------|--------------------------|
| Well Shutdown Limits                       | BAAQMD 8-34-117.4   | Records   | Periodic/<br>Daily                               | BAAQMD 8-34-117.6 and 501.1 | No more than 5 wells at a time or < 10% of total collection system, whichever is less  | Continuous | N/A                      |
| Well Shutdown Limits                       | BAAQMD 8-34-117.6 and 501.1   | Records   | Periodic/<br>Daily                               | BAAQMD 8-34-117.5           | ≤ 24 hours per well  | Continuous | N/A                      |
| Gas Flow                                   | BAAQMD 8-34-501.10 and 508  | Gas Flow Meter and Recorder (every 15 minutes)  | Continuous                                       | BAAQMD 8-34-301 and 301.1   | Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system | Continuous | N/A                      |
| TOC (Total Organic Compounds Plus Methane) | BAAQMD 8-34-501.6 and 503 and BAAQMD Condition # 1028, Part 17h                                 | Quarterly Inspection of collection and control system components with portable analyzer and Records   | Periodic/<br>Quarterly                           | BAAQMD 8-34-301.2           | ≤ 1000 ppmv as methane (component leak limit)  | Continuous | N/A                      |
| Non-Methane Organic Compounds (NMOC)       | BAAQMD 8-34-412 and 8-34-501.3 and 8-34-501.4 and 507 BAAQMD Condition # 1028, Parts 15 and 17h | Annual Source Tests and Records   | Periodic/<br>Annual                              | BAAQMD 8-34-301.3           | ≤ 98% removal by weight OR < 30 ppmv dry basis @ 3% O <sub>2</sub> , expressed as methane (applies to A-3 only)                          | Continuous | N/A                      |
| TOC  | BAAQMD 8-34-415, 416, 501.6, 506 and 510 and BAAQMD Condition # 1028, Part 17h                  | Monthly visual inspection of cover, quarterly inspection of surface with portable analyzer, various re-inspection times for leaking areas and records | Periodic/<br>Monthly, Quarterly, and Event basis | BAAQMD 8-34-303             | ≤ 500 ppmv as methane at 2 inches above surface  | Continuous | N/A                      |

**City of Palo Alto Landfill**  
**TITLE V SEMI-ANNUAL MONITORING REPORT**

|  |   |
|--|---|
| <b>Site:</b> City of Palo Alto Landfill                      | <b>Facility ID#:</b> A2721                                |
| <b>Permitted Unit:</b> S-5 Wood Grinder and A-5 Water Sprays | <b>Reporting Period:</b> from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria            | Monitoring Requirement Citation   | Monitoring Type   | Monitoring Frequency                | Citation of Limit                                | Limit   | Compliance | Corrective Actions Taken |
|--------------------------------------|---|---|-------------------------------------|--|---|------------|--------------------------|
| Collection System Installation Dates | BAAQMD 8-34-501.7 and 501.8 and BAAQMD Condition # 1028, Parts 12a-c, 12e-f     | Records   | Periodic / Event basis              | BAAQMD 8-34-304.2                                | For Active Areas: Collection system components must be installed and operating by 5 years + 60 days after initial waste placement   | Continuous | N/A                      |
| Collection System Installation Dates | BAAQMD 8-34-501.7 and BAAQMD Condition # 1028, Parts 12a-c, 12e-f               | Records   | Periodic / Event basis              | BAAQMD 8-34-304.3                                | For Any Uncontrolled Areas or Cells: Collection system components must be installed and operating within 60 days after the uncontrolled area or cell accumulates 1,000,000 tons of decomposable waste | Continuous | N/A                      |
| Wellhead Pressure                    | BAAQMD 8-34-414, 501.9 and 505.1 and BAAQMD Condition #1028, Part 17h           | Monthly Inspection and Records  | Periodic / Monthly                  | BAAQMD 8-34-305.1                                | < 0 psig  | Continuous | N/A                      |
| Temperature of Gas at Wellhead       | BAAQMD 8-34-414, 501.9 and 505.2 and BAAQMD Condition # 1028, Part 17h          | Monthly Inspection and Records  | Periodic / Monthly                  | BAAQMD 8-34-305.2                                | < 55 C (< 131 F)  | Continuous | N/A                      |
| Gas Concentration s at Wellhead      | BAAQMD 8-34-414, 501.9 and 505.3 or 505.4 and BAAQMD Condition # 1028, Part 17h | Monthly Inspection and Records  | Periodic / Monthly                  | BAAQMD 8-34-305.3 or 305.4                       | N2 < 20% by volume OR O2 < 5% by volume   | Continuous | N/A                      |
| Gas Flow                             | BAAQMD 8-34-501.1, 501.2, 501.10 and 508 and BAAQMD Condition # 1028, Part 17f  | Records of Landfill Gas Flow Rates, Collection and Control Systems Downtime, and Collection System Components | Continuous / Periodic / Event basis | BAAQMD Permit Condition #1028, Parts 5, 6, and 7 | Landfill gas collection system shall operate continuously and all collected gases shall be vented to a properly operating control system  | Continuous | N/A                      |

**City of Palo Alto Landfill**  
**TITLE V SEMI-ANNUAL MONITORING REPORT**

|  |   |
|--|---|
| <b>Site:</b> City of Palo Alto Landfill                      | <b>Facility ID#:</b> A2721                                |
| <b>Permitted Unit:</b> S-5 Wood Grinder and A-5 Water Sprays | <b>Reporting Period:</b> from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria                  | Monitoring Requirement Citation                | Monitoring Type   | Monitoring Frequency   | Citation of Limit                      | Limit  | Compliance | Corrective Actions Taken |
|--|--|---|------------------------|--|--|------------|--------------------------|
| Continuous Monitors                        | 40 CFR 60.7(b)                                 | Operating Records for All Continuous Monitors (for gas flow and temperature monitors) | Periodic / Daily       | 40 CFR 60.13(e)                        | Requires Continuous Operation except for breakdowns, repairs, calibration, and required span adjustments                               | Continuous | N/A                      |
| Startup Shutdown or Malfunction Procedures | 40 CFR 63.1980(a-b)                            | Records (all occurrences, duration of each, and corrective actions)                   | Periodic / Event basis | 40 CFR 63.6(e)                         | Minimize Emissions by Implementing SSM Plan  | Continuous | N/A                      |
| Temperature of Combustion Zone (CT)        | BAAQMD 8-34-501.3 and 507, Part 15 and 17h     | Temperature Sensor and Recorder (continuous)  | Continuous             | Permit Condition #1028, Part 9         | CT > 1420 °F, averaged over any 3-hour period (applies to A-3 only)  | Continuous | N/A                      |
| NOx  | BAAQMD Condition #1028, Part 15 and 17h        | Annual Source Test and Records  | Periodic / Annual      | BAAQMD Condition #1028, Part 11        | < 32 ppmv at 15% O <sub>2</sub> , dry  | Continuous | N/A                      |
| CO   | BAAQMD Permit Condition #1028, Part 15 and 17h | Annual Source Test and Records  | Periodic / Annual      | BAAQMD Permit Condition #1028, Part 12 | < 206 ppmv @ 15% O <sub>2</sub> , dry  | Continuous | N/A                      |
| SO <sub>2</sub>                            | None   | None  | None                   | BAAQMD 9-1-301                         | Property Line Ground Level Limits ≤ 0.5 ppm for 3 minutes and ≤ 0.25 ppm for 60 min. and ≤ 0.05 ppm for 24 hours (applies to A-3 only) | Continuous | N/A                      |
| SO <sub>2</sub>                            | Permit Condition #1028, Part 14 and 17h        | Sulfur analysis of landfill gas   | Periodic / Quarterly   | BAAQMD 9-1-302                         | < 300 ppm (dry basis) (applies to A-3 only)  | Continuous | N/A                      |
| Total Sulfur Content in LFG                | Permit Condition #1028, Part 14 and 17h        | Sulfur analysis of landfill gas   | Periodic / Annual      | Permit Condition #1028, Part 14        | In collected LFG: ≤ 860 ppmv of TRS (expressed as H <sub>2</sub> S)  | Continuous | N/A                      |

City of Palo Alto Landfill

TITLE V SEMI-ANNUAL MONITORING REPORT

|                 |                                       |                   |                                  |
|-----------------|---------------------------------------|-------------------|----------------------------------|
| Site:           | City of Palo Alto Landfill            | Facility ID#:     | A2721                            |
| Permitted Unit: | S-5 Wood Grinder and A-5 Water Sprays | Reporting Period: | from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria                   | Monitoring Requirement Citation         | Monitoring Type                                  | Monitoring Frequency   | Citation of Limit                      | Limit  | Compliance | Corrective Actions Taken |
|---|---|--|------------------------|--|--|------------|--------------------------|
| H <sub>2</sub> S                            | None                                    | NA   | None                   | BAAQMD 9-2-301                         | Property Line Ground Level Limits: ≤ 0.6 ppm averaged over 3 min. and ≤ 0.03 ppm for 60 min. and < 0.05 ppm averaged over 60 min.                        | Continuous | N/A                      |
| Amount of Waste Accepted                    | BAAQMD Condition # 1028, Part 17a       | Records  | Periodic / Daily       | BAAQMD Condition #1028, Part 1a        | ≤ 400 tons/day of waste accepted and placed in S-1   | Continuous | N/A                      |
| Amount of Waste Accepted                    | BAAQMD Condition # 1028, Part 17a       | Records  | Periodic / Daily       | BAAQMD Condition #1028, Part 1a        | 0 tons/day of waste accepted and placed in S-1   | Continuous | N/A                      |
| Amount of Waste Accepted                    | BAAQMD Condition # 1028, Part 17a       | Records  | Periodic / Daily       | BAAQMD Condition #1028, Part 1b and 1c | ≤ 5,830,000 tons (cumulative amount of all decomposable materials) and ≤ 7,759,000 yd <sup>3</sup> (cumulative amount of all wastes and cover materials) | Continuous | N/A                      |
| Heat Input                                  | Permit Condition #1028, Part 8 and 17g  | Records  | Periodic / Daily       | Permit Condition #1028, Part 8         | ≤ 720 MMBTU/day and ≤ 262,800 MMBTU/yr   | Continuous | N/A                      |
| Total Chlorinated Compounds in Landfill Gas | BAAQMD Condition #1028, Part 16 and 17h | Annual Gas Characterization Analysis and Records | Periodic / Annual      | Permit Condition #1028, Part 13        | < 104 ppmv, dry  | Continuous | N/A                      |
| Opacity                                     | Permit Condition #20476, Part 5         | Visual Observation of Operations                 | Periodic / Event basis | BAAQMD Regulation 6-301 and SIP 6-301  | Ringelmann 1.0 for <3 minutes in any hour  | Continuous | N/A                      |
| Opacity                                     | Permit Condition #20476, Part 5         | Visual Observation of Operations                 | Periodic / Event basis | Permit Condition #20476, Part 4        | ≤ Ringelmann 1.0   | Continuous | N/A                      |

**City of Palo Alto Landfill**

**TITLE V SEMI-ANNUAL MONITORING REPORT**

|  |   |
|--|---|
| <b>Site:</b> City of Palo Alto Landfill                      | <b>Facility ID#:</b> A2721                                |
| <b>Permitted Unit:</b> S-5 Wood Grinder and A-5 Water Sprays | <b>Reporting Period:</b> from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria | Monitoring Requirement Citation | Monitoring Type | Monitoring Frequency | Citation of Limit                     | Limit  | Compliance | Corrective Actions Taken |
|---------------------------|---------------------------------|-----------------|----------------------|---------------------------------------|--|------------|--------------------------|
| FP                        | None                            | None            | None                 | BAAQMD Regulation 6-311 and SIP 6-311 | For P<57,320 pounds/hour:<br>E = 0.026(P) <sup>0.67</sup> ,<br>For P>57,320 pounds/hr:<br>E = 40 pounds/hr where:<br>E = Maximum allowable emission rate (lbs/hr); and<br>P = process weight rate (lbs/hr) | Continuous | N/A                      |
| Wood Throughput           | Permit Condition #20476, Part 2 | Records         | Periodic / Daily     | Permit Condition #20476, Part 1       | ≤ 50,000 tons/year   | Continuous | N/A                      |

**City of Palo Alto Landfill**

**TITLE V SEMI-ANNUAL MONITORING REPORT**

|  |   |
|--|---|
| <b>Site:</b> City of Palo Alto Landfill                      | <b>Facility ID#:</b> A2721                                |
| <b>Permitted Unit:</b> S-5 Wood Grinder and A-5 Water Sprays | <b>Reporting Period:</b> from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria | Monitoring Requirement Citation | Monitoring Type                  | Monitoring Frequency   | Citation of Limit               | Limit                                    | Compliance | Corrective Actions Taken |
|---------------------------|---------------------------------|----------------------------------|------------------------|---------------------------------|--|------------|--------------------------|
| Opacity                   | Permit Condition #20476, Part 5 | Visual Observation of Operations | Periodic / Event basis | BAAQMD Regulation 6-301         | Ringelmann 1.0 for 3 minutes in any hour | Continuous | N/A                      |
| Opacity                   | Permit Condition #20476, Part 5 | Visual Observation of Operations | Periodic / Event basis | Permit Condition #20476, Part 4 | Ringelmann 1.0                           | Continuous | N/A                      |
| FP                        | None                            | None                             | None                   | BAAQMD Regulation 6-311         | 40 pounds/hour                           | Continuous | N/A                      |
| Wood Throughput           | Permit Condition #20476, Part 2 | Records                          | Periodic / Daily       | Permit Condition #20476, Part 1 | 50,000 tons/year                         | Continuous | N/A                      |

Note: The Grinder was sold to a third party Iron Planet in September 2012.

# City of Palo Alto Landfill

## TITLE V SEMI-ANNUAL MONITORING REPORT

|  |   |
|--|---|
| <b>Site:</b> Palo Alto Landfill                                | <b>Facility ID#:</b> A2721                                |
| <b>Permitted Unit:</b> S-7 TROMMEL SCREEN AND A-5 WATER SPRAYS | <b>Reporting Period:</b> from 12/1/2012 through 5/31/2013 |

| Type of Limit or Criteria | Monitoring Requirement Citation | Monitoring Type                  | Monitoring Frequency   | Citation of Limit                     | Limit   | Compliance | Corrective Actions Taken |
|---------------------------|---------------------------------|----------------------------------|------------------------|---------------------------------------|---|------------|--------------------------|
| Opacity                   | Permit Condition #20478, Part 5 | Visual Observation of Operations | Periodic / Event basis | BAAQMD Regulation 6-301 and SIP 6-301 | Ringelmann 1.0 for < 3 minutes in any hour  | Continuous | N/A                      |
| Opacity                   | Permit Condition #20478, Part 5 | Visual Observation of Operations | Periodic / Event basis | Permit Condition #20478, Part 4       | ≤ Ringelmann 1.0  | Continuous | N/A                      |
| FP                        | None                            | None                             | None                   | BAAQMD Regulation 6-311               | For P<57,320 pounds/hour:<br>E = 0.026(P) <sup>0.67</sup> ,<br>For P>57,320 pounds/hr:<br>E = 40 pounds/hr<br>where: E = Maximum allowable emission rate (lbs/hr); and P = process weight rate (lbs/hr) | Continuous | N/A                      |
| Wood Throughput           | Permit Condition #20478, Part 2 | Records                          | Periodic / Daily       | Permit Condition #20476, Part 1       | ≤ 50,000 tons/year  | Continuous | N/A                      |

Note: The Screener was sold to a third party Iron Planet in September 2012.