

IN THE CIRCUIT COURT OF THE FIFTEENTH JUDICIAL CIRCUIT  
OGLE COUNTY, ILLINOIS  
CHANCERY DIVISION

PEOPLE OF THE STATE OF ILLINOIS, )  
*ex rel.* KWAME RAOUL, Attorney )  
General of the State of Illinois, )  
 )  
Plaintiff, )  
 ) No. 2020 CH 35  
-vs- )  
 )  
ADVANCED DISPOSAL SERVICES )  
ORCHARD HILLS LANDFILL, INC., )  
an Illinois corporation, )  
 )  
 )  
Defendant. )

**CONSENT ORDER**

Plaintiff, PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* KWAME RAOUL, Attorney General of the State of Illinois, the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (“Illinois EPA”), and Defendant, ADVANCED DISPOSAL SERVICES ORCHARD HILLS LANDFILL, INC. (“ADS”), (collectively “Parties to the Consent Order”), have agreed to the making of this Consent Order and submit it to this Court for approval.

**I. INTRODUCTION**

This stipulation of facts is made and agreed upon for purposes of settlement only and as a factual basis for the Court’s entry of the Consent Order and issuance of any injunctive relief. None of the facts stipulated herein shall be introduced into evidence in any other proceeding regarding the violations of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/1 *et seq.* (2020), and the Illinois Pollution Control Board (“Board”) regulations, alleged in the Complaint except as otherwise provided herein. It is the intent of the Parties to this Consent Order that it be a final judgment on the merits of this matter.

**A. Parties**

1. On May 21, 2020, a Complaint was filed on behalf of the People of the State of Illinois by Kwame Raoul, Attorney General of the State of Illinois, on his own motion and upon the request of the Illinois EPA, pursuant to Section 42(d) and (e) of the Act, 415 ILCS 5/42(d) and (e) (2020), against the Defendant.

2. The Illinois EPA is an administrative agency of the State of Illinois, created pursuant to Section 4 of the Act, 415 ILCS 5/4 (2020).

3. At all times relevant to the Complaint, Defendant was and is an Illinois corporation who owned and operated a municipal solid waste and special waste landfill located at 8920 Illinois Highway 251, Davis Junction, Ogle County, Illinois (“Landfill” or “Site”).

**B. Former Consent Order in 2011 CH 120**

The terms, conditions and obligations of this Consent Order extinguish and replace the terms, conditions, and obligations of the Consent Order entered by this Court on December 20, 2012 in the case PEOPLE OF THE STATE OF ILLINOIS V. VEOLIA ES ORCHARD HILLS LANDFILL, INC., an Illinois corporation now known as ADVANCED DISPOSAL SERVICES ORCHARD HILLS LANDFILL, INC., an Illinois corporation, Case Number 2011 CH 120 (Ogle County Illinois).

**C. Allegations of Non-Compliance**

Plaintiff contends that the Defendant has violated the following provisions of the Act and Board regulations:

Count I: AIR POLLUTION, violation of Section 9(a) of the Act, 415 ILCS 5/9(a) (2020), and Section 201.141 of the Board regulations, 35 Ill. Adm. Code 201.141; and

Count II: FAILURE TO OPERATE COLLECTION AND CONTROL SYSTEM TO PREVENT MALODORS, violation of Section 21(d)(2) of the Act, 415 ILCS

5/21(d)(2) (2020), and Sections 811.311(d) and 811.107(e) of the Board regulations, 35 Ill. Adm. Code Sections 811.311(d) and 811.107(e).

**D. Non-Admission of Violations**

The Defendant represents that it has entered into this Consent Order for the purpose of settling and compromising disputed claims without having to incur the expense of contested litigation. By entering into this Consent Order and complying with its terms, the Defendant does not affirmatively admit the allegations of violation within the Complaint and referenced above, and this Consent Order shall not be interpreted as including such admission.

**E. Compliance Activities to Date**

Between May 9, 2019, the date when Illinois EPA issued its violation notice, and the date of entering this Consent Order, the Defendant has taken the following actions to address the alleged violations:

1. Ceased accepting construction and demolition debris fines, which are known to generate odorous hydrogen sulfide gas during decomposition;
2. Converted 38 caisson-style gas extraction wells to conventional gas extraction wells to improve capture of landfill gas;
3. Installed 16 additional horizontal gas collectors;
4. Installed more than 11,000 feet of additional lateral piping to improve collected landfill gas flow;
5. Replaced or rebuilt the four blowers, which provide landfill gas wellfield vacuum;
6. Installed 11.5 acres of final landfill cover, 20 acres of intermediate landfill cover, and 13 acres of temporary geomembrane cover;
8. Replaced the exiting utility flare with a new enclosed flare;
9. In November and December 2022, Defendant addressed odor issues in the Southeast portion of the Landfill by installing 6 gas collection wells, a new collection header, collection lateral piping, and isolation valves; and

10. In January and February 2023, Defendant installed 4 gas collection wells, a new collection header, lateral piping and isolation valves in the southwest portion of the Landfill.

## II. APPLICABILITY

1. This Consent Order shall apply to and be binding upon the Parties to the Consent Order. The Defendant waives as a defense to any enforcement action taken pursuant to this Consent Order the failure of any of its officers, directors, agents, employees or successors or assigns to take such action as shall be required to comply with the provisions of this Consent Order. This Consent Order may be used against the Defendant in any subsequent enforcement action or permit proceeding as proof of a past adjudication of violation of the Act and the Board Regulations for all violations alleged in the Complaint in this matter, for purposes of Sections 39 and 42 of the Act, 415 ILCS 5/39 and 42 (2020).

2. The Defendant shall notify each contractor to be retained to perform work required in this Consent Order of each of the requirements of this Consent Order relevant to the activities to be performed by that contractor, including all relevant work schedules and reporting deadlines, and shall provide a copy of this Consent Order to each contractor already retained no later than thirty (30) calendar days after the date of entry of this Consent Order. In addition, the Defendant shall provide copies of all schedules for implementation of the provisions of this Consent Order to the prime vendor(s) supplying the control technology systems and other equipment required by this Consent Order.

3. No change in ownership, corporate status or operator of the facility shall in any way alter the responsibilities of the Defendant under this Consent Order. In the event that the Defendant proposes to sell or transfer any real property or operations subject to this Consent Order, the Defendant shall notify the Plaintiff thirty (30) calendar days prior to the conveyance

of title, ownership or other interest, including a leasehold interest in the facility or a portion thereof. The Defendant shall make as a condition of any such sale or transfer, that the purchaser or successor provide to Defendant site access and all cooperation necessary for Defendant to perform to completion any compliance obligation(s) required by this Consent Order. The Defendant shall provide a copy of this Consent Order to any such successor in interest and the Defendant shall continue to be bound by and remain liable for performance of all obligations under this Consent Order. In appropriate circumstances, however, the Defendant and a proposed purchaser or operator of the facility may jointly request, and the Plaintiff, in its discretion, may consider modification of this Consent Order to obligate the proposed purchaser or operator to carry out future requirements of this Consent Order in place of, or in addition to, the Defendant. This provision does not relieve the Defendant from compliance with any regulatory requirement regarding notice and transfer of applicable facility permits.

### **III. JUDGMENT ORDER**

This Court has jurisdiction of the subject matter herein and of the Parties to the Consent Order and, having considered the stipulated facts and being advised in the premises, finds the following relief appropriate:

#### **IT IS HEREBY ORDERED, ADJUDGED AND DECREED:**

##### **A. Civil Penalty**

1. The Defendant shall pay a civil penalty of One Hundred Thousand Dollars (\$100,000.00). Payment shall be tendered at time of entry of the Consent Order.
2. The civil penalty payment shall be made by certified check or money order payable to the Illinois EPA for deposit into the Environmental Protection Trust Fund ("EPTF").
3. The case name and case number shall appear on the face of the certified check or

money order.

**B. Stipulated Penalties, Interest and Default**

1. If the Defendant fails to complete any activity or fails to comply with any response or reporting requirement by the date specified in this Consent Order, the Defendant shall provide notice to the Plaintiff of each failure to comply with this Consent Order and shall pay stipulated penalties in the amount of \$400.00 per day per violation for up to the first fifteen (15) days of violation, \$500.00 per day per violation for the next fifteen (15) days of violation, and \$1,000.00 per day per violation thereafter until such time that compliance is achieved. The Plaintiff may make a demand for stipulated penalties upon the Defendant for its noncompliance with this Consent Order. However, failure by the Plaintiff to make this demand shall not relieve the Defendant of the obligation to pay stipulated penalties. All stipulated penalties shall be payable within thirty (30) calendar days of the date the Defendant knows or should have known of its noncompliance with any provision of this Consent Order.

2. If the Defendant fails to make any payment required by this Consent Order on or before the date upon which the payment is due, the Defendant shall be in default and the remaining unpaid balance of the penalty, plus any accrued interest, shall be due and owing immediately. In the event of default, the Plaintiff shall be entitled to reasonable costs of collection, including reasonable attorney's fees.

3. Pursuant to Section 42(g) of the Act, 415 ILCS 5/42(g) (2020), interest shall accrue on any penalty amount owed by the Defendant not paid within the time prescribed herein. Interest on unpaid penalties shall begin to accrue from the date such are due and continue to accrue to the date full payment is received. Where partial payment is made on any penalty

amount that is due, such partial payment shall be first applied to any interest on unpaid penalties then owing.

4. The stipulated penalties shall be enforceable by the Plaintiff and shall be in addition to, and shall not preclude the use of, any other remedies or sanctions arising from the failure to comply with this Consent Order.

**C. Stipulated Penalty and Interest Payment Procedures**

1. All payments required by Section III.B of this Consent Order shall be made by certified check or money order payable to the Illinois EPA for deposit into the EPTF. Payments shall be sent by first class mail and delivered to:

Illinois Environmental Protection Agency  
Fiscal Services  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276

2. The case name and case number shall appear on the face of the certified check or money order. A copy of the certified check or money order and any transmittal letter shall be sent to:

Christopher Grant  
Karen Howard  
Assistant Attorneys General  
Environmental Bureau  
Illinois Attorney General's Office  
69 W. Washington Street, Suite 1800  
Chicago, Illinois 60602

**D. Future Compliance**

1. The Defendant shall not accept at the Landfill the following materials for disposal, alternate daily cover, road building or any other use:

- a. Construction or Demolition Debris fines containing any pulverized drywall or gypsum wall board; or

- b. Processed Construction or Demolition Debris materials containing any pulverized drywall or gypsum wallboard.
2. The Defendant shall comply with the provisions of the Landfill Gas Collection and Control System Monitoring and Maintenance Plan, attached as *Exhibit 1* to this Consent Order.
3. Within 18 months of the date of entry of this Consent Order, the Defendant shall install an enhanced intermediate cover system on the portions of the Landfill depicted on *Exhibit 2* to this Consent Order. The enhanced intermediate cover system shall consist of:
  - a. A minimum 6" soil base grading layer;
  - b. A minimum 30-mil thick geomembrane liner;
  - c. A minimum 12" thick soil cover layer; and
  - d. Suitable vegetation.
4. The Defendant shall immediately commence off-site monitoring for odors in accordance with the locations and provisions set forth in the Off-Site Odor Monitoring Plan, a copy of which is attached hereto as *Exhibit 3*.
5. The Defendant maintains a hotline telephone number for residents to contact in the event the residents detect or experience odors attributable to the Landfill. The current odor hotline number is 888-341-8886. The Defendant shall make this phone number available to local residents and shall prominently display the odor complaint hotline on its website <https://www.wmsolutions.com/locations/details/id/954>. The Defendants shall continue to maintain the hotline number. If Defendant chooses to make any changes to the current hotline number, it shall provide 30 days prior notice to the contacts listed in Section III.D.H of this Consent Order.

6. The Illinois EPA, its employees and representatives, and the Attorney General, his employees and representatives, shall have the right of entry into and upon the Defendant's Facility (or Site) which is the subject of this Consent Order, at all reasonable times for the purposes of conducting inspections and evaluating compliance status. In conducting such inspections, the Illinois EPA, its employees and representatives, and the Attorney General, his employees and representatives, may take photographs, samples, and collect information, as they deem necessary.

7. This Consent Order in no way affects the responsibilities of the Defendant to comply with any other federal, state or local laws or regulations, including but not limited to the Act, Board Regulations and the terms and conditions of Defendant's Illinois EPA-issued permits.

8. The Defendant shall cease and desist from future violations of the Act and Board Regulations that were the subject matter of the Complaint.

**E. *Force Majeure***

1. *Force majeure* is an event arising solely beyond the control of the Defendant, which prevents the timely performance of any of the requirements of this Consent Order and shall include, but is not limited to, events such as floods, fires, tornadoes, other natural disasters, and labor disputes beyond the reasonable control of the Defendant. An increase in costs associated with implementing any requirement of this Consent Order shall not, by itself, excuse the Defendant for a failure to comply with such a requirement.

2. When a *force majeure* event occurs which causes or may cause a delay in the performance of any of the requirements of this Consent Order, the Defendant shall orally notify the Illinois EPA through notification to Mark Gurnik, (217) 782-9825 and Christopher Grant, (312) 814-5388 within forty-eight (48) hours of the occurrence. Written notice shall be given to

the Plaintiff's representatives as listed in Section III.H of this Consent Order as soon as practicable, but no later than ten (10) calendar days after the claimed occurrence. This section shall be of no effect as to the particular event involved if the Defendant fails to comply with these notice requirements.

3. Within ten (10) calendar days of receipt of any written *force majeure* notice, the Plaintiff shall respond in writing regarding the Defendant's claim of a delay or impediment to performance. If the Plaintiff agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of the Defendant and that the Defendant could not have prevented the delay by the exercise of due diligence, the parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay, by a period equivalent to the delay actually caused by such circumstances. Such stipulation may be filed as a modification to this Consent Order. The Defendant shall not be liable for stipulated penalties for the period of any such stipulated extension.

4. If the Plaintiff does not accept the Defendant's claim of a *force majeure* event, the Defendant must file a petition with the Court within twenty (20) calendar days of receipt of the Plaintiff's determination in order to contest the imposition of stipulated penalties. The Plaintiff shall have twenty (20) calendar days to file its response to said petition. The burden of proof of establishing that a *force majeure* event prevented the timely performance shall be upon the Defendant. If this Court determines that the delay or impediment to performance has been or will be caused by circumstances solely beyond the control of the Defendant and that the Defendant could not have prevented the delay by the exercise of due diligence, the Defendant shall be excused as to that event (including any imposition of stipulated penalties), for all requirements

affected by the delay, for a period of time equivalent to the delay or such other period as may be determined by this Court.

**F. Enforcement and Modification of Consent Order**

1. This Consent Order is a binding and enforceable order of this Court. This Court shall retain jurisdiction of this matter and shall consider any motion by any party for the purposes of interpreting and enforcing the terms and conditions of this Consent Order. The Defendant agrees that notice of any subsequent proceeding to enforce this Consent Order may be made by mail and waives any requirement of service of process.

2. The Parties to the Consent Order may, by mutual written consent, extend any compliance dates or modify the terms of this Consent Order without leave of this Court. A request for any modification shall be made in writing and submitted to the representatives designated in Section III.H of this Consent Order. Any such request shall be made by separate document, and shall not be submitted within any other report or submittal required by this Consent Order. Any such agreed modification shall be in writing and signed by authorized representatives of each party, for filing and incorporation by reference into this Consent Order.

**G. Dispute Resolution**

1. Except as provided herein, the Parties to the Consent Order may seek to informally resolve disputes arising under this Consent Order, including but not limited to the Illinois EPA's decision regarding appropriate or necessary response activity, approval or denial of any report, plan or remediation objective, or the Plaintiff's rejection of a request for modification or termination of the Consent Order. The Plaintiff reserves the right to seek enforcement by the Court where the Defendant has failed to satisfy any compliance deadline within this Consent Order. The following are also not subject to the dispute resolution

procedures provided by this section: a claim of *force majeure*, a failure to make any required payment and any circumstances posing a substantial danger to the environment or to the public health or welfare of persons.

2. The dispute resolution procedure must be invoked by a party through a written notice describing the nature of the dispute and the party's position with regard to such dispute. The other party shall acknowledge receipt of the notice and schedule a meeting to discuss the dispute informally not later than fourteen (14) calendar days from the receipt of such notice. These informal negotiations shall be concluded within thirty (30) calendar days from the date of the first meeting between the parties, unless the parties agree, in writing, to shorten or extend this period. The invocation of dispute resolution, in and of itself, shall not excuse compliance with any requirement, obligation or deadline contained herein, and stipulated penalties may be assessed for failure or noncompliance during the period of dispute resolution. As part of the resolution of any dispute, the Parties to the Consent Order, by agreement or by order of this Court, may extend or modify the schedule for completion of work under this Consent Order to account for the delay in the work that occurred as a result of dispute resolution.

3. In the event that the parties are unable to reach agreement during the informal negotiation period, the Plaintiff shall provide the Defendant with a written summary of its position regarding the dispute. The position advanced by the Plaintiff shall be considered binding unless, within twenty (20) calendar days of the Defendant's receipt of the written summary of the Plaintiff's position, the Defendant files a petition with this Court seeking judicial resolution of the dispute. The Plaintiff shall respond to the petition by filing the administrative record of the dispute and any argument responsive to the petition within twenty (20) calendar days of service of Defendant's petition. The administrative record of the dispute shall include the written notice

of the dispute, any responsive submittals, the Plaintiff's written summary of its position, the Defendant's petition before the Court and the Plaintiff's response to the petition. The Plaintiff's position shall be affirmed unless, based upon the administrative record, it is against the manifest weight of the evidence.

**H. Notice and Submittals**

Except for payments, the submittal of any notice, reports or other documents required under this Consent Order, shall be delivered to the following designated representatives:

As to the Plaintiff

Christopher Grant  
Karen Howard  
Assistant Attorneys General  
Environmental Bureau  
Illinois Attorney General's Office  
69 W. Washington Street, Suite 1800  
Chicago, Illinois 60602

Mark Gurnik  
Assistant Counsel, Division of Legal Counsel  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276

Paul Cooney  
Director  
Ogle County Solid Waste Management Department  
909 Pines Road  
Oregon, IL 61061  
815-732-4020

As to the Defendant

Sr. Legal Counsel  
Legal Department – Health, Safety & Environment  
Waste Management  
720 E. Butterfield Road  
4<sup>th</sup> Floor

Lombard, Illinois 60148

District Manager  
Orchard Hills Landfill  
8290 Highway 251  
Davis Junction, Illinois 61020

**I. Release from Liability**

In consideration of the Defendant's payment of a \$100,000.00 penalty, its commitment to cease and desist as contained in Section III.D.8 above, and completion of all activities required hereunder, the Plaintiff releases, waives and discharges the Defendant from any further liability or penalties for the violations of the Act and Board Regulations that were the subject matter of the Complaint herein. The release set forth above does not extend to any matters other than those expressly specified in Plaintiff's Complaint filed on May 21, 2020. The Plaintiff reserves, and this Consent Order is without prejudice to, all rights of the State of Illinois against the Defendant with respect to all other matters, including but not limited to the following:

- a. criminal liability;
- b. liability for future violations;
- c. liability for natural resources damage arising out of the alleged violations; and
- d. the Defendant's failure to satisfy the requirements of this Consent Order.

Nothing in this Consent Order is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the State of Illinois may have against any person, as defined by Section 3.315 of the Act, 415 ILCS 5/3.315 (2020), other than the Defendant.

**J. Execution and Entry of Consent Order**

This Order shall become effective only when executed by all Parties to the Consent Order and the Court. This Order may be executed by the parties in one or more counterparts, all of

which taken together shall constitute one and the same instrument. The undersigned representatives for each party certify that they are fully authorized by the party whom they represent to enter into the terms and conditions of this Consent Order and to legally bind them to it.

**K. Termination**

1. The Defendant may request in writing that this Consent Order terminate no sooner than thirty six (36) months after the Defendant has completed installation of the enhanced intermediate cover system described in Section II.D.3 above., provided that the Defendant has been in continuous compliance with the terms of the Consent Order for the thirty six (36) months preceding the request. Any such request must be made by notice to the Plaintiff and include a statement that the Defendant has completed all actions required by this Consent Order and has been in continuous compliance with the terms of the Consent Order for the thirty six (36) months preceding the request and the following certification by a responsible corporate official of the Defendant:

I certify under penalty of law that this statement was prepared under my direction or supervision, and that the information submitted in or accompanying this statement of final compliance is to the best of my knowledge true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and or imprisonment for knowing violations.

2. The Plaintiff shall notify the Defendant of its decision on the request within forty-five (45) calendar days of the Plaintiff's receipt of the written request. If the Plaintiff agrees to terminate this Consent Order, the Plaintiff and the Defendant shall jointly file a notice with the Court that the Consent Order is terminated. If the Plaintiff does not agree to terminate this Consent Order, the Plaintiff shall provide the Defendant written notification stating the reasons why this Consent Order should not be terminated and the Defendant may then invoke the

Dispute Resolution provisions. The Consent Order shall remain in effect pending resolution of any dispute by the parties or the Court concerning whether the Defendant has completed its obligations under this Consent Order and is in compliance with the terms of the Consent Order. The provisions of Sections III.B (stipulated penalties, III.D.1 (prohibition on acceptance of waste stream), III.D.5 (complaint line), III.D.8 (cease and desist), and III.I (Release from Liability), of this Consent Order shall survive and shall not be subject to and are not affected by the termination of any other provision of this Consent Order.

WHEREFORE, the parties, by their representatives, enter into this Consent Order and submit it to this Court that it may be approved and entered.

AGREED:

FOR THE PLAINTIFF:

PEOPLE OF THE STATE OF ILLINOIS  
*ex rel.* KWAME RAOUL, Attorney General  
of the State of Illinois

MATTHEW J. DUNN, Chief  
Environmental Enforcement/  
Asbestos Litigation Division

BY:   
STEPHEN J. SYLVESTER, Chief  
Environmental Bureau  
Assistant Attorney General

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

JOHN J. KIM, Director  
Illinois Environmental Protection Agency

BY:   
CHARLES W. GUNNARSON  
Chief Legal Counsel

DATE: 5/2/23

DATE: 5/2/23

FOR THE DEFENDANT:

ENTERED:

ADVANCED DISPOSAL SERVICES  
ORCHARD HILLS LANDFILL INC.

BY: Beard Pollak

\_\_\_\_\_  
J U D G E

Its: President

DATE: \_\_\_\_\_

DATE: 4/28/2023

*People v. Advanced Disposal Services Orchard Hills Landfill Inc., 2020 CH 35*

# Exhibit

# A

**Landfill Gas Collection and Control System  
Monitoring and Maintenance Plan  
Orchard Hills Landfill**

Landfill gas collection and odor control at Orchard Hills Landfill ("OHLF") will be achieved through operation, monitoring and maintenance of the landfill gas collection and control system ("GCCS"). The following practices will be implemented to insure proper operation, monitoring and maintenance of the GCCS.

I. Individual Landfill Gas Collector Data

All landfill gas extraction wells and horizontal gas collectors will be monitored on a monthly basis, for the following parameters:

- a. Initial & Adjusted Static Pressure. Static pressure is the vacuum or negative pressure applied to the waste mass and is measured upstream of both the orifice plate and wellhead valve on the collector wellhead.
- b. Initial & Adjusted Landfill Gas Temperature.
- c. Oxygen (O<sub>2</sub>).
- d. Methane (CH<sub>4</sub>).
- e. Initial & Adjusted Flow - Wellhead flow represents the actual volume of landfill gas being extracted from the collector. Initial flow refers to the flow prior to wellhead adjustment and adjusted flow refers to the flow after wellhead adjustment.
- f. Carbon Dioxide (CO<sub>2</sub>).
- g. Balance Gas - Balance gas is the total concentration of all gases other than methane, carbon dioxide, and oxygen (i.e., balance gas = 100% - CH<sub>4</sub>% - CO<sub>2</sub>% - O<sub>2</sub>%).
- h. System Pressure (Available Vacuum) - system pressure is the vacuum on the header side of the extraction well or horizontal collector valve and measures the amount of vacuum available at each individual collector for landfill gas extraction.

Compliance with applicable regulatory operational standards will be maintained. Newly installed wells and horizontal collectors will be monitored on a weekly basis until steady gas quality and flow results are obtained.

II. Flare Data

The following parameters will be monitored at the blower/flares on a monthly basis: landfill gas flow, landfill gas composition (methane, carbon dioxide, oxygen, balance gas), and flare vacuum applied to the well field. If flares are not operational during a given month due to the operation of a landfill gas recovery plant, such data will be obtained at the plant.

III. Data Collection and Evaluation

An Envision gas analyzer or equivalent instrument will be used to measure and collect both the individual landfill gas well and horizontal collector data and flare data described above. The data will be stored in the instrument as it is collected and downloaded for reporting, analysis, and archiving.

This data will be used to 1) verify compliance with the appropriate regulatory operational standards; 2) identify trends in GCCS data, including gas quality and flow, to assess individual well and collector performance; and 3) identify potential GCCS problems.

**Landfill Gas Collection and Control System  
Monitoring and Maintenance Plan (cont'd)  
Orchard Hills Landfill**

Individual gas extraction wells or horizontal collectors with any of the following parameter changes (based on monthly monitoring data) will be monitored on a weekly basis until the parameters reach steady conditions:

- Wells or collectors with greater than 50% decrease in flow.
- Wells or collectors with greater than 20 inches water column ("wc") decrease in system pressure.
- Wells or collectors with a change in gas temperature of greater than 30 degrees Fahrenheit.

Because of these parameter changes, these wells and collectors will be included in the quarterly GCCS review described in Section VIII below. In the event any of the parameters continue to deviate from steady conditions, more frequent monitoring beyond weekly will be performed to assess the problem.

In addition, the following parameter changes in any individual well collector may be indicative of a problem with the well or collector:

- Wells or collectors with less than 5 cfm flow.
- Wells or collectors with greater than 58% methane.
- Wells or collectors with less than 2 inches wc difference between wellhead pressure and system pressure.

These problems may consist of 1) a well or collector being watered-out; 2) a collapsed or broken well or collector; 3) a blocked header pipe; 4) declining gas production; or 5) overstressed well or collector. Wells or collectors exhibiting any of these characteristics will be evaluated and if necessary, appropriate corrective measures will be implemented as soon as practical. These activities will be recorded in the well/collector maintenance log discussed in Section VI. If no corrective action is necessary, this will also be noted on the well/collector maintenance log, along with an appropriate explanation. Wells and collectors with any of these characteristics will also be included in the quarterly GCCS review described in Section VIII.

#### IV. Low Flow Gas Extraction Wells

Low flow characteristics (<5 cfm flow) exhibited in landfill gas extraction wells may indicate the well is watered-out, e.g., sufficient liquid has accumulated in the well to limit gas extraction. For low flow wells, the following steps will be undertaken:

The liquid level in the well will be measured. If it is difficult or impossible to lower a measuring tape down the well, this may be indicative of a fully or partially collapsed well casing which would likely be the cause of the low flow condition and the well should be abandoned and/or replaced.

If liquid is present, the level will be compared to well slot or perforation elevations. If greater than 50% of the well perforations or slots are submerged, a pump will be installed in the well to remove the liquids and the following procedure implemented:

**Landfill Gas Collection and Control System  
Monitoring and Maintenance Plan (cont'd)  
Orchard Hills Landfill**

- Pumping will be performed for a two-month period after which the effectiveness of pumping on gas flow will be evaluated.
- If the liquid removal results in a significant increase (>30%) in landfill gas flow, pumping will be continued. If the well continues to show that greater than 50% of well perforations are submerged, liquid levels in surrounding wells will be measured and evaluated. If necessary, pumping of surrounding wells will be performed.
- If liquid removal results in minimal change in landfill gas flow after greater than 50% of well perforations have been exposed, pumping will be discontinued and abandonment and/or replacement of the well will be considered.

If liquid is not present or does not cover greater than 50% of well perforations, the low flow may be attributable to clogged well perforations, or declining gas production. In these cases, abandonment and/or replacement of the well will be considered. A down-hole camera may be used to inspect the well. These activities will be recorded on the well/collector maintenance log.

V. Extraction Well Abandonment/Replacement

Landfill gas extraction wells will be abandoned under the following conditions: 1) wells that are watered out and which cannot be rehabilitated through pumping; 2) wells with collapsed casings or clogged slots that cannot be repaired; 3) wells that exhibit declining landfill gas production, indicated by flows less than 5 cfm and landfill gas temperatures less than 100°F for a period of at least 120 days; or 4) wells that when shut off, are determined to be under vacuum influence from surrounding wells or collectors.

Abandoned extraction wells will be replaced with new extraction wells to the extent necessary to maintain effective landfill gas control. Installation of replacement wells in these cases will be determined by consideration of waste age, gas generation of surrounding wells and radius of influence of surrounding wells.

VI. GCCS Maintenance Records

Records of maintenance performed on extraction wells, horizontal collectors, flares, and gas collector header piping will be maintained. The gas collection header maintenance log will document maintenance activities performed on the gas collection header piping system, including condensate management components. The flare maintenance log will document maintenance activities performed on flare units. In the event a new flare becomes operational, a new maintenance log will be created for that unit. The well/collector maintenance log will document maintenance activities performed on both vertical landfill gas extraction wells and horizontal gas collectors from the time of installation to abandonment or replacement. A separate maintenance log will be prepared for individual wells and collectors. An electronic version of these logs may be utilized.

VII. Gas Extraction Well Leachate Pumping

- a. Liquid Level and Well Depth Measurement Practice

**Landfill Gas Collection and Control System  
Monitoring and Maintenance Plan (cont'd)  
Orchard Hills Landfill**

Wells will be surveyed on a semi-annual basis to provide current top of well elevations. Depth to liquid and total well depth for each well will also be measured on a semi-annual basis. The percentage of perforations submerged by liquid will be calculated with this data, along with the top of well elevation data and available gas well construction as-built information.

Depth to liquid will be measured by liquid level sounder, bubbler tube or downhole camera. Likewise, total well depth will be measured by liquid level sounder or downhole camera. If it is difficult or impossible to lower a measuring device down the well, this may be indicative of a fully or partially collapsed well casing and further investigation will be performed. Replacement or abandonment of the well may be necessary. Measurements will be recorded and maintained in a database. Depth to liquid and total well depth will be compared to past measurements for trend evaluation.

b. Criteria for Pump Installation and Removal

Based on the calculation of percentage of perforations submerged by liquids, if greater than 50% of perforations are submerged, a pump will be installed in the well for liquid removal. Other factors that may be considered for pump installation include surface emission exceedances occurring near and/or around the well or the presence of landfill gas odors in the vicinity of the well. Upon pump installation within a given well, the following procedure will be implemented:

- Pumping will be performed for a two-month period after which the effectiveness of pumping on gas flow will be evaluated.
- If the liquid removal results in a significant increase (>30%) in landfill gas flow, pumping will be continued.
- If the well continues to show that greater than 50% of well perforations are submerged, liquid levels in surrounding wells may be measured and evaluated. If necessary, pumping of surrounding wells may be performed.
- If liquid removal results in minimal change in landfill gas flow after greater than 50% of well perforations have been exposed, pumping will be discontinued and abandonment and/or replacement of the well will be considered.

The presence of air lines and dedicated leachate force mains in the vicinity of a well will also be assessed as part of pump installation. Installation of pumps in wells lacking air lines and force mains will be delayed until such infrastructure can be installed. In addition, existing air lines and leachate force mains will be evaluated to ensure sufficient capacity exists to handle the expected pumping volumes. Pumping of liquids into gas system headers will not be performed to avoid flooding them.

If liquid is not present or does not cover a significant portion of the well perforations, low gas flow may be attributable to clogged well perforations, or declining gas production from the well. In these cases, abandonment and/or replacement of the well will be considered.

c. Pump Selection and Operation

Pump selection will be dictated by liquid properties such as temperature, viscosity, and pH. Generally, air operated pneumatic pumps are the preferred choice for gas well liquid pumping

**Landfill Gas Collection and Control System  
Monitoring and Maintenance Plan (cont'd)  
Orchard Hills Landfill**

because of their versatility. Such pumps are available in a wide range of sizes, material of construction, and valve arrangements and the selection of a particular vendor and pneumatic pump will be determined on a well-by-well basis. Prior to installation, the pump will be shop tested to verify proper operation.

Pumps will be installed at least five feet above the well bottom to prevent it from getting stuck in solids that may accumulate in the bottom of well. When the pump is operating, the flow rate will be limited to less than 5 gallons per minute to minimize the potential for solids to be drawn into the well and to maintain the porosity of the gravel pack around well perforations.

d. Inspection and Maintenance

Pertinent inspection and maintenance information will be recorded on individual well/collector maintenance logs described in Section IV, including top of well survey data, depth to liquid (if present), total depth measurements and percentage of perforations submerged by liquid. In addition, for wells with installed pumps, the pump serial number will be recorded along with the length of the entire pump string prior to installation.

Wells with installed pumps will be inspected on a weekly basis. The following information, at a minimum, will be recorded:

- Well ID.
- Date of inspection.
- Above ground infrastructure in place and if functioning properly.
- Air line and liquid discharge line properly connected to well and system.
- Pump operation status.
- Pump counter reading.
- Any unusual conditions.

Using the pump counter readings, the volume of leachate pumped from each gas well will be calculated on a weekly basis. This information will be recorded in a spreadsheet so that pumping quantities can be tracked and evaluated. Significant changes in pumping quantities from week to week may be indicative of a problem in the well warranting further investigation.

Pumps will be removed for inspection, cleaning, and repair at a minimum on an annual basis, but more frequently if conditions dictate. Such servicing will be noted on the individual well/collector maintenance logs. When a pump is removed, liquid level, total well depth and length of pump string will be measured and recorded.

An inventory of pump parts such as fittings, counters, air regulators, pipes, hoses, etc. will be maintained onsite for pump repairs. In addition, backup pumps will be kept on site in the event a malfunctioning pump cannot be repaired in a timely manner. When a pump is replaced, information that may determine the cause of pump failure will also be recorded.

VIII. Quarterly GCCS Review

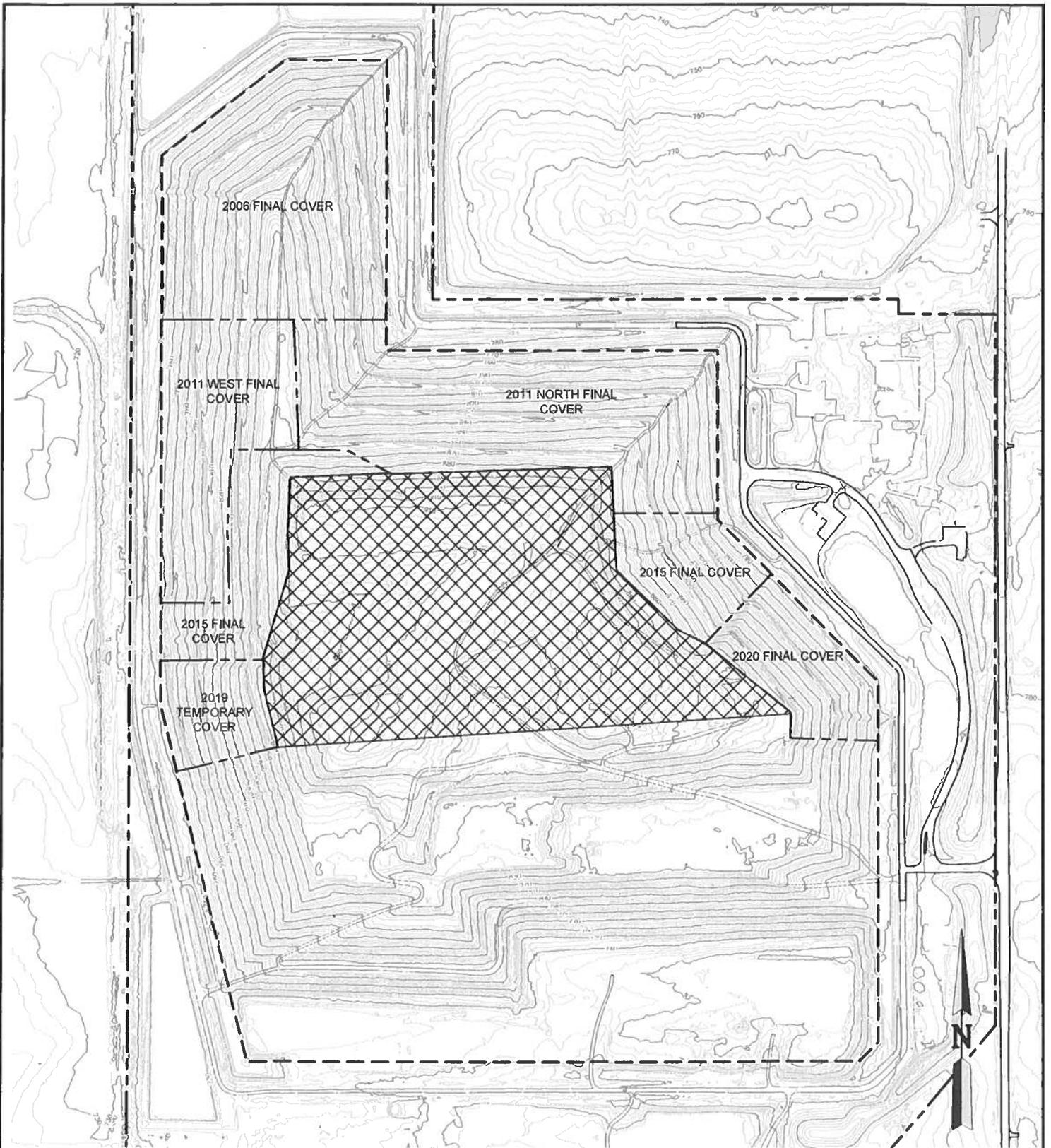
A review of GCCS performance will be completed on a quarterly basis. This will include review of the previous three months of GCCS data, including individual collector monitoring parameters, total system flow and gas quality. Individual collectors with the parameter changes and characteristics described previously in Section III will be evaluated. Liquid management

**Landfill Gas Collection and Control System  
Monitoring and Maintenance Plan (cont'd)  
Orchard Hills Landfill**

information will be reviewed, including number of wells with pumps, installation and removal of pumps within the past quarter and overall pump performance. Appropriate assessment and corrective measures will be discussed and documented. Corrective measures already implemented will also be reviewed and discussed. The review and any performance problems identified will be documented in a GCCS quarterly review report which will be prepared and submitted to Illinois EPA on a quarterly basis, such reports will be submitted to Illinois EPA within 45 days after the end of the quarter. Inspection, adjustment, repair or replacement of system components resulting from these quarterly reviews will be documented on the appropriate maintenance log described previously.

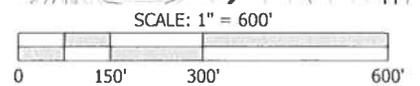
Exhibit

B



LEGEND

- PERMITTED SOLID WASTE BOUNDARY
- PROPERTY BOUNDARY
- · - · - · EXISTING COVER PHASE LIMIT
- XXXXXX APPROXIMATE ENHANCED INTERMEDIATE COVER AREA



**ATTACHMENT 2**  
**ENHANCED INTERMEDIATE COVER AREA**  
 ORCHARD HILLS LANDFILL

Exhibit

C

## **Off-site Odor Monitoring Plan Orchard Hills Landfill**

### Regular Weekly Off-site Odor Monitoring and Corrective Measures

1. Orchard Hills Landfill ("OHLF" or "landfill") will conduct weekly odor monitoring at the locations shown on Figure 1 utilizing an olfactory device or other method to measure the level of odor, if any. If this monitoring detects an odor attributable to the landfill, OHLF will investigate the cause of the odor and implement corrective measures, which may include, but not be limited to, placement of additional cover, or the repair, replacement, installation or adjustment of gas collection system components. Following the completion of the corrective measures, OHLF will monitor the area in question to confirm the cessation of the odor. If an odor is detected at any of the locations shown on Figure 1 and is not attributable to the landfill, this will be noted in the monitoring report.

### Increased Off-site Odor Monitoring Triggered by Complaints

2. In the event OHLF receives 1-5 complaints in a given week from a citizen (via hotline, website or direct call) concerning an odor allegedly caused by OHLF, or receives information about such an odor from a representative of the Illinois EPA, Ogle County, Winnebago County, or any nearby municipality within 5 miles, offsite odor monitoring will be conducted semi-weekly (twice per week) until the number of weekly odor complaints decreases to zero. If no odor complaints are received in a week, OHLF will revert to regular weekly monitoring. In any instance in which the monitoring detects an odor attributable to the landfill, OHLF will take the corrective measures outline in Paragraph 1 above.

3. In the event OHLF receives 6-10 odor complaints in a given week, offsite odor monitoring will be conducted every other day until the number of weekly odor complaints decreases to 1-5, in which case off-site monitoring reverts to a semi-weekly frequency. If no odor complaints are received in a week, off-site monitoring will revert to regular weekly monitoring. In any instance in which the monitoring detects an odor attributable to the landfill, OHLF will take the corrective measures outline in Paragraph 1 above.

4. In the event OHLF receives greater than 10 odor complaints in a given week, offsite odor monitoring will be conducted on a daily basis until 1) the number of weekly odor complaints decreases to 6-10, in which case the off-site monitoring reverts to an every other day frequency or 2) the number of weekly odor complaints decreases to 1-5, in which case off-site monitoring reverts to a semi-weekly frequency. If no odor complaints are received in a week, off-site monitoring will revert to regular weekly monitoring. In any instance in which the monitoring detects an odor attributable to the landfill, OHLF will take the corrective measures outlined in Paragraph 1 above.

5. The results of off-site monitoring along with any corrective measures implemented will be documented and maintained at the landfill.

**Figure 1**  
**Off-site Monitoring Locations**  
**Orchard Hills Landfill**



ID	Location
<b>Landfill Perimeter</b>	
P-1	Landfill Entrance
P-2	Rt. 251 & WM collection company
P-3	IL 251 & Edson Rd.
P-4	Edson Rd. between Rt. 251 & RR tracks
P-5	Scott Rd. at LF fence
P-6	SE corner of LF
<b>Community</b>	
C-1	6914 IL 251
C-2	IL 251 & IL 72
C-3	Junction Rd. & Heartland Dr.
C-4	Junction Rd. & High Rd.
C-5	Junction Rd. & Scott Rd.
C-6	Scott Rd. & Moulton Rd.
C-7	Friday Rd. & Edson Rd.
C-8	Friday Rd. & Southbend Rd.
C-9	Baxter Rd. & RR tracks
C-10	Baxter Rd. & Rt. 251
C-11	Ralph Rd. & Southbend Rd.
C-12	New Milford School Rd. & Rt. 251
C-13	Baxter Rd. & Lindenwood Rd.
C-14	3663 Baxter Rd.
C-15	McNeal Rd. cul-de-sac