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March 15, 2010

Mr. Troy D. Breathwaite
Air Compliance & Monitoring Manager
Department of Environmental Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach, VA 23462

Re: Southeastern Public Service Authority, Regional Landfill, Registration
No. 61341 Response to Department of Environmental Quality Warning
Letter dated February 24, 2010

Dear Mr. Breathwaite:

I am writing to respond to the above-referenced Warning Letter. As you will see from the contents of this letter and its enclosure, SPSA is taking action as if it had been positively and scientifically identified as the source of all of the odors described in the Warning Letter. SPSA has taken action because SPSA would be a logical source of the odors, and SPSA owes a duty to nearby residents and the City of Suffolk to address concerns related to the landfill. However, nothing in this letter should be taken as an admission by SPSA that it is the source of all, or indeed any, of the odors.

Other Potential Sources of Odor

According to a WAVY online article dated May 20, 2009, a C&D landfill near SPSA's landfill accepted "tens of thousands" of sheets of the notorious Chinese drywall. Chinese drywall is known for giving off hydrogen sulfide and thus a rotten egg odor, especially when exposed to humidity and heat. The C&D landfill has been subject to exactly the same near record setting precipitation as SPSA's landfill over the last year. C&D landfills have no gas collection system. As noted in the DEQ Air Inspection Report printed February 24, 2009 and included with the Warning Letter (the "Air Inspection Report"), Ms. Eberhart reported odors (attributed by the DEQ to SPSA) more than three miles from SPSA's landfill. Odors are not necessarily adjacent to a source.

Similarly, it is SPSA's understanding that neighborhoods along Nansemond Parkway in the vicinity of the landfill have experienced problems with their sewer system. The sewer system has been the subject of several recent leak tests, and pump station number 14 reportedly has experienced serious problems with raw sewage draining to a swale behind the station. Hydrogen sulfide, which has a rotten egg odor, is commonly known as "sewer gas," according to OSHA and ATSDR fact sheets.

Finally, the nearby Dismal Swamp, subject to the same heavy precipitation as SPSA's landfill and the C&D landfill, could be a source. Hydrogen sulfide, in addition to

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being referred to as sewer gas, is commonly known as swamp gas, according to OSHA and ATSDR fact sheets. Decomposition in swamps during extremely wet weather cycles has been known to generate odors that are objectionable.

DEQ's focus on SPSA should not prevent the DEQ from investigating other odor sources. Odors of various descriptions have been reported. SPSA may be the source of only one odor, or perhaps none.

Actions Taken

That said, SPSA in the spirit of cooperation and its responsibility for the public's welfare, has taken the following actions:

- A. Commissioned an odor study by SCS Engineers at a cost to SPSA of \$39,900. SPSA anticipates the study will be completed by May 1, and SPSA will provide a copy of the SCS report to the DEQ and the City of Suffolk as soon as it is available.
- B. Invited DEQ staff to visit the landfill, and cooperated with DEQ's site investigation, on at least four occasions.
- C. Tracked complaints and reported complaints to the appropriate agencies.
- D. Conducted a voluntary monitoring program under DEQ's guidance to identify potential sources of odors.
- E. Covered trash at a frequency and at a depth greater than required under state law. All trash is covered at night. Cover soils are staged in close proximity to the working face to facilitate expeditious covering at a rate exceeding that required under Virginia's Solid Waste Management Regulations.
- F. Significantly reduced the size of the working face of Cell VI at night. The face has been reduced to a size that safely accommodates only one truck at a time.
- G. Installed and tested an odor suppression system at the perimeter of Cell VI operations.
- H. Authorized a landfill gas contractor, US Energy Biogas, to install a horizontal temporary gas collection system on the perimeter of Cell VI, utilizing the cleanouts for four vaults, which system is drawing approximately 400 cubic feet per minute.
- I. Revised its odor control plan to add requirements and responsibilities to address odors by specific potential source: leachate ponds, gas wells, vaults, and the landfill itself. The revised odor control plan is enclosed. Note that with regard to gas collection systems, the plan provides for a graduated approach. For instance, under the

revised plan, vertical wells first would be installed in Cell VI A, and then horizontal wells installed (and sacrificed) in Cell VI B if the preceding actions are not effective.

J. Established a direct SPSA dial-in line for residents to call when they detect odors that may be landfill related. SPSA staff will respond to any reports immediately. Pertinent information will be provided to residents via SPSA's website, mailings and links to other appropriate websites.

Comments on Warning Letter

The Warning Letter requested that SPSA notify the DEQ of disputes or comments regarding the observations in the Warning Letter. SPSA has the following comments:

General

1. The Warning Letter refers to staff site visits on February 3, 9, 12 and 17. The Air Inspection Report does not contain information about the February 3 visit. Please provide the inspection summary for the site visit on February 3.

Observation Number 1

2. Please specify the number of residents on record as complaining, or the exact number of complaints - since some residents may have complained more than once. It would be helpful if Observation #1 included the specific neighborhoods of those who complained, as opposed to the "Nansemond Parkway area," just as was done in the Air Inspection Report.

3. The odors are described as "rotten egg, garbage, plastic, etc." For enforcement action purposes, there should be more specificity, and the odors should not be linked together. As described above, it is very possible that there is more than one source of odors, and that there are multiple odors. Each complaint should have its own odor description, unless a complaint included a report of multiple odors, such as rotten eggs and garbage. "Plastic" odors is not a helpful description. The use of "etc." is not specific enough for use in an enforcement action.

Observation Number 2

4. The February 3 date for a DEQ staff visit that identified objectionable odors should be supported with an Air Inspection Report. (See Number 1 above.)

5. Please list the specific neighborhoods adjacent to Nansemond Parkway where complaints have originated.

6. Instead of "vast majority of complaints," please provide an approximate percentage.

Mr. Troy D. Breathwaite

March 15, 2010

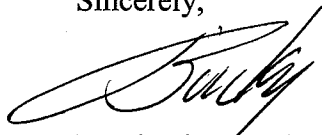
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7. SPSA requests that the DEQ drop from the second sentence in Observation #2 the text "that was identified by DEQ staff as landfill gas." The staff encountered an odor they deemed to violate 9 VAC 5-40-140, but the DEQ did not have the technical means to identify the odor as landfill gas. As described above, if staff noted a rotten egg smell, that smell can be identified as landfill gas, sewer gas or swamp gas, depending on the context and the individual.

8. It is not clear what supported DEQ staff's characterization of the landfill as the "predominant source" of the odor. The staff could have concluded that it was "a" source, or if different odors were noted, identified which odor the DEQ attributed to SPSA.

SPSA in the spirit of full cooperation has responded to the Warning Letter and described actions SPSA has taken and will be taking to ensure compliance with state law and regulations. SPSA has enclosed an updated odor control plan, as requested by DEQ. SPSA's comments on the Warning Letter, and the suggestion there could be another source (or multiple sources) of the odors complained of, do not take away from SPSA's resolve to act promptly to address this problem in accordance with the DEQ's requirements.

Sincerely,



Rowland L. Taylor
Executive Director

Enclosures

SPSA Regional Landfill Odor Control Plan

SPSA will proactively work to minimize odor associated with the operation of the Regional Landfill. Specific activities to reduce odor will include:

- Covering incoming waste on a frequent basis
- Activating odor neutralizing system when odor is detected and/or when the wind direction is toward surrounding residential areas
- Installing a temporary gas collection system to flare methane gas
- Initiating the Odor Response Plan detailed in EMS SOP 1.33 when odor complaints are received.

I. Frequent Covering of Wastes

Virginia's Solid Waste Management Regulations require that waste disposed of at a sanitary landfill be covered at the end of each operating day or at more frequent intervals as necessary to control disease vectors, fires, odors, blowing litter and scavenging. Because the Regional Landfill operates on a 24-hour basis, per day with no official end to the operating day, SPSA has established a schedule for covering wastes to minimize odors. At minimum, daily cover will be applied during the evening shift. The Landfill Superintendent or his designee will ensure there is sufficient cover material stockpiled on the working face before leaving each day. Upon his arrival the next day, he will verify that the working face was sufficiently covered. In addition, SPSA will continue its practice of covering highly putrescible wastes upon arrival. A trench will be dug to deposit the waste and cover material will be immediately applied.

II. Temporary Gas Collection System

A temporary gas system consisting of horizontal gas wells and a flare will be installed around Cell VI. Methane gas will be continually drawn from the landfill and burned by the flare as conditions are suitable.

III. Odor Response Plan

SPSA has developed a detailed Odor Response Plan to address odor complaints concerning any of its waste handling facilities. This plan is detailed in the attached EMS SOP 1.33. SPSA personnel have been trained on this procedure.

IV. Odor Source ID at the SPSA Regional Landfill

1. Leachate Ponds

Odor may be noted during the warmer months associated with the leachate ponds. Staff will confirm that all four aerators are operational. Leachate conditions will be noted, mainly color. Deodorizer product may be added to the aeration pond if an odor is determined to be coming from the leachate ponds.

2. Gas Collection System

If a positive vacuum conditions exist at gas collections wells, a well may emit landfill gas (LFG). LFG may contain various compounds which could produce a malodor. If it is noted that a well does have a positive vacuum, the SPSA LFG Contractor will be notified and the well will be adjusted to a negative vacuum condition. The well field is currently inspected and adjusted on a weekly basis, which is planned to continue.

3. Leachate Collection Vaults

The leachate collection vaults may have odor associated with the collection of LFG and leachate. If odor is noted at a leachate collection vault, the vault will be checked for leaks and scheduled for repair. While conducting maintenance on pumps in the vaults, if a pump has to be pulled the flange will be reset and tightened during the repair period.

4. Working Face

Based on the current Virginia Solid Waste Management Regulations, landfill staff currently are covering at better than the daily cover requirement. This condition will continue during periods which may produce increases in malodor, such as periods of heavy rain. In addition, cover material will be staged at the working face later in the day for ease of cover operations at close of business. All trash should be covered by the end of the day.



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1.0 PURPOSE

Waste handling activities and waste decomposition at SPSA facilities can result in offensive odors. Offensive odors may also be mistakenly attributed to SPSA's facilities but may in fact emanate from conditions or sources that are not under SPSA's control. To ensure proper actions are taken to identify sources of odor at all SPSA waste handling facilities. To ensure proper verification, monitoring, and neutralizing corrective actions are taken to mitigate odors leaving the property from these locations that are under SPSA's control. To establish and maintain communication between SPSA, DEQ or other regulatory agency and complainant until malodor issue is resolved.

2.0 SCOPE

This procedure applies to any complaint received at any SPSA waste handling facility.

3.0 RESPONSIBILITIES

3.1 The Superintendent of the SPSA facility subject to a malodor complaint is responsible for ensuring timely actions are taken in accordance with SOP.

3.2 The Facility Supervisor is responsible for the following:

- Initiating the Odor Complaint Form (EMS Form 40);
- Contacting the Environmental Compliance Coordinator or their designee to take odor readings, if needed, as per the Odor Complaint Form;

3.3 The Environmental Supervisor is responsible for:

- Ensuring that the portable "Nasal Ranger" is kept in good working order including prior to each use ensuring qualified personnel respond to odor complaints in order to record any findings;

3.4 The Environmental Compliance Coordinator is responsible for:

- Notifying DEQ of odor incidents determined to emanate from SPSA's operations and subsequent corrective actions taken to abate those odors, by contacting DEQ's PReP (Pollution Response Program) number; 518-2077, and obtaining an Incident Response (IR) number for tracking purposes, if required.
- Notifying all affected parties when the odor condition no longer exists and submitting a formal written report to DEQ within five (5) business days of that incident;



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- Maintaining the completed Odor Complaint Form for three (3) years and a database of odor complaints received;
- Following up with complainant following the internal investigation of the source of the odor.

3.5 The responding Environmental Management representatives are responsible for:

- Taking odor readings with the nasal ranger if needed at any SPSA facility in response to odor complaints or at the request of facility supervisors during peak production times;
- Completing survey maps to include all Nasal Ranger readings taken if needed, and logging weather conditions; and
- Notifying the responsible Environmental Compliance Coordinator of all measurements and actions taken.

3.6 All SPSA employees are responsible for immediately reporting odor complaints to their supervisors.

4.0 REFERENCES

- Contact information for SPSA's Department of Environmental Management (DEM) personnel is as follows:

Name	Title	Phone #	Email
Gordon Briggs	Environmental Supervisor	539-9373 Ext 5 (Office) 418-3564 (Mobile)	gbriggs@spsa.com
Glenda B. Dodson	Environmental Compliance Coordinator	539-9373 Ext 7 (Office) 418-3563 (Mobile)	gdodson@spsa.com
Scott Whitehurst	Regional Landfill Superintendent	393-3171 (Office) 449-5352 (Mobile)	swhitehurst@spsa.com
Amy Simons Bobby Scott Mike Kelly	Environmental Specialists	418-3560 418-0510 418-3562	asimons@spsa.com rscott@spsa.com mkelly@spsa.com

- 9 VAC 5-40-140 Existing Stationary Sources



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5.0 PROCEDURES

5.1 Definitions:

- 5.1.1 **Odor** – A sensation that is a conscious reaction to a stimulus of our olfactory sense organs by odorous compounds in the air.
- 5.1.2 **Malodor** – That odor that is given off of putrescible solid waste and yard waste that has measurable odor being emitted to the atmosphere.
- 5.1.3 **Neutralizing Agent** – Any commercial odor neutralizing (not masking) chemical delivered directly in a spray form to sources of odor.
- 5.1.4 **Odor character** – The terms we used to describe an odor, generally as like something in our common experience; e.g., like "sewage", or "rotten eggs", or "garbage", or "nail polish", or "coffee", or "grass".
- 5.1.5 **Odor Intensity** – The strength of the perceived odor, such as "mild", "moderate", or "objectionable".

5.2 Discussion:

- 5.2.1 This procedure discusses the actions for responding to an odor complaint at SPSA facilities, or to identify known odor-causing conditions (such as sustained heavy rainfall). Each odor complaint will be investigated to determine the source of odor, which may or may not be a SPSA operation.
- 5.2.2 This SOP requires SPSA personnel to initiate actions to:
 - Quickly respond to odor complaints (within 3-business hours or less of receiving the complaint);
 - Confirm the existence of an odor and identify its possible sources;
 - Document all readings taken and other pertinent data;
 - Notify all affected parties of actions taken to mitigate odors determined to originate from SPSA's activities (including the DEQ or other regulatory agency and the complainant); and
 - Document corrective actions taken to mitigate the odor from SPSA's Facilities.



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- Odor complaints that are received greater than 3 hours after the time of the perceived odor cannot be readily determined to be emanating from an affected facility, thus complaints that are received 3 hours after the perceived odor shall only be addressed by determining operating conditions at the affected facility and the status of any potential upset conditions

5.3 Procedure:

- 5.3.1 Any SPSA Supervisor who receives an odor complaint shall fill out Sections A and B of the Odor Complaint Form and immediately forward the completed form by fax or email to the affected facility Supervisor for follow up; copying the Superintendent of the affected facility to alert him that an odor complaint has been received. The affected facility's Supervisor shall acknowledge receipt of the odor complaint form the Superintendent and to the person that generated the form.
- 5.3.2 The facility's Supervisor shall attempt to interview with the complainant for more details, if they were not provided in the original complaint, then complete Section B of the Odor Complaint Form.
- 5.3.3 If the Supervisor has already determined that his operation is the source of the odor, he shall immediately attempt to determine the source, and arrange to have odor readings taken with the nasal ranger in that area to determine the specific source of the odor.
- 5.3.4 The Supervisor shall forward the odor complaint form to the Environmental Compliance Coordinator or designee, of the complaint listing the location, complainant's name, phone number and type of malodor complaint.
- 5.3.5 The affected Supervisor will contact the Environmental Compliance Coordinator for odor complaints to initiate communication between DEQ or other regulatory agency and the complainant.
- 5.3.6 The Environmental Specialist or other Environmental personnel will take Nasal Ranger readings as well as record weather conditions.
- 5.3.7 The readings will be taken at site boundary; or, if needed, at the area where the complainant indicates here he smelled the malodors. All readings, shall be documented and retained for at least three (3) years.
- 5.3.8 If the Environmental Management Representative determines the cause of the odor is from a source not under SPSA's control, they shall record their findings including the identified source on Section C of the Odor Complaint Form, and proceed to section 5.3.14.



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- 5.3.9 If the Environmental Management Representative determines that a SPSA operation is the source of the odor they shall complete their readings, record the current weather information, and immediately inform the site supervisor and the Environmental Compliance Coordinator, if appropriate, about their findings.
- 5.3.10 After all initial and follow up actions have been completed, the Environmental personnel shall send a copy of all records to the Environmental Compliance Coordinator.
- 5.3.11 The Environmental Compliance Coordinator will then complete Section D of the Odor Complaint Form, ensuring that all required notifications are made. Notifications include:
- If the odor is determined to be emanating from the landfill: Call the responsible party of the odor to inform him of the conditions existing at their area of responsibility;
 - Notify the complainant of actions taken to abate the odor or informing them of environmental conditions beyond SPSA's control are believed to be that are the source of the odor.
 - Call to DEQ or other regulatory agency, if required, when the odor is derived from a SPSA waste handling facility. DEQ will assign an Incident Report (IR) number to the malodor complaint. That number will be recorded on Section D of the Odor Complaint Form.

6.0 RECORDS

- EMS Form 40 - Odor Complaint Form
- EMS Form 41 (B—C) Odor Control Response Map

7.0 DOCUMENT APPROVAL AND HISTORY

Revision	Date	Reason for Revision
0	9/11/06	Initial release
1	9/29/06	Scope of procedure expanded to include SPP. Responsibility for PIO added. Clarification of requirements to respond to multiple odor complaints from the same area
2	11/9/06	Added hydrogen sulfide to parameters monitored at facilities. Added DESM contact information. Added 24-business hour time limit for responding to malodor complaints.



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3	9/17/07	Clarified notification requirements for responding to malodor complaints. Updated contact information.
4	2/27/08	Updated contact information. Reformatted procedure.
5	09/25/08	Added WTPO's to the list of responders. Included changes for WTE after hours sampling. Adjusted the title for PIO to Public Relations Administrator.
6	03/10/10	Removed references to WTE Facilities and personnel. Shifted some responsibilities to the Environmental Supervisor. Transferred Public Information responsibilities to the Environmental Compliance Coordinator. Clarified the procedure.

SOP REVIEWED FOR TECHNICAL ACCURACY BY

Revision	Printed Name	Date
6	Glenda B. Dodson	
6	Scott D. Whitehurst	

APPROVED BY

Facility/Department	Approval Signature	Date
Management Representative		