

# Landfill Odor

Where Do We Stand?

January 2011

# Landfill Personnel and Experience

## Michael Burgess

- -Hired Jan. 14, 1985 as HEO II
- -Promoted to Landfill Foreman effective May 11, 1987
- -Appointed Landfill Supervisor 2 Nov. 13, 1988
- -Terminated June 14, 1995 (voluntary resignation) worked for Higginson Buchanan Landfill in Chesapeake for 11 years
- -Rehired October 23, 2007 as HEO Sr.
- -Promoted to Landfill Supervisor 2 July 14, 2008
- -Promoted to Environmental Supervisor Aug. 9, 2010
- -Adj. Years of Svc. = **13 yrs 6 mos. + 11 yrs noted above**
- -Certified Landfill Operator Class I and II
- -Certified in Medical Waste Operations Class III

# Landfill Personnel and Experience, Cont.

## Ronald Williams

- -Landfill Supervisor I since April 5, 1993 (17 yrs 8 mos)
- -Tenure with SPSA: 17 years

## Gregory Jones

- -Landfill Supervisor I since June 2, 2008 (2 yrs 6 mos)
- -Tenure with SPSA: 22 years
- Certified Landfill Operator Class I and II

## Scott Whitehurst

- -Landfill Superintendent since May 4, 2009 (1 yr 7 mos)
- -Tenure with SPSA: 3 years
- -15 years experience in the environmental management field in all applicable media
- -Certified Landfill Operator Class I and II, REHS, RLD, NIMS Qualified

# Previous Landfill Superintendents

- **Walter Cook** -- 1985 through 1993 8 years No landfill experience, but extensive construction experience including surveying. He was an Engineer.
- **Joseph Gilbert** -- 1993 through 1997 4 years No landfill experience. He was an Engineer and was employed as a Project Manager with several employers.
- **Eugene Cole** -- 1997 through 2002 5 years No landfill experience. Construction experience was vast as he was a retired US Navy SeaBee. Transferred from the landfill to transportation in 2002.
- **Jeffrey Ford** -- 2002 through 2007. 5 years No landfill experience. Background was hazardous waste disposal. Started with us in environmental.
- **Charles "Chuck" Harrell** -- 2007 through 2009. 2 years No landfill experience. Background was in environmental. Started with SPSA in environmental.

# What We Have Done and Continue To Do

- We continue to comply with all requirements of the odor control plan and DEQ Letter of Agreement
  - We are covering the working face daily.
  - We completed the installation of Cell VI gas wells – Prior to Oct. 1, 2010 in Cells VI A and B (\$400,000 – SEP costs).
  - We submitted a revised odor control plan to DEQ which was approved and is being followed.
  - We are continuing to operate with a reduced working face thereby reducing the “open” area of Cell VI not covered with “material”.
  - We had been using an odor neutralizer which had a baby powder scent (stopped on Nov. 24<sup>th</sup> ) but are now using an odorless product which will neutralize potential odors. On Dec. 30<sup>th</sup> , due to increased odor complaints we started back using the neutralizer so that if the odors were coming from the landfill they would be neutralized the best we could. (55 gallon barrel approx. \$1,500 and lasts approx. 1 ½ months)
  - The Landfill is operating only 12 hours per day now as compared to the previous 24 hours. This reduces disruption of the landfill cover and provides longer periods of time for waste to have cover material on it.
  - Landfill is still only accepting construction and demolition debris; no putrescible waste except during a Wheelabrator called diversion. Generally, 1 to 2 days max.

# What We Have Done and Continue To Do con't

- We had SCS Engineers conduct an odor study (\$40,000) to determine possible sources of odors, primarily hydrogen sulfide.
- We are tracking calls received from residents and DEQ and we are responding in a timely manner where possible (viewable at [www.spsa.com](http://www.spsa.com) for the complete log)
- We are completing an application for an additional 6 “ to 12” of intermediate cover to Cell VI B and are considering an additional foot of intermediate cover on certain areas of Cell V (Cell V estimated cost to complete is \$220,000-\$600,000 depending on where cover material comes from)
- Cell V will also have a replacement of a storm water conveyance line and regrading of a berm to control surface water runoff.
- USEB (SEP) continues to monitor Cell VI gas wells to ensure the wells do not become “watered in”. By not being “watered in” this allows for greater amounts of gas to be pulled from the Cell and subsequently used by Ciba or flared.

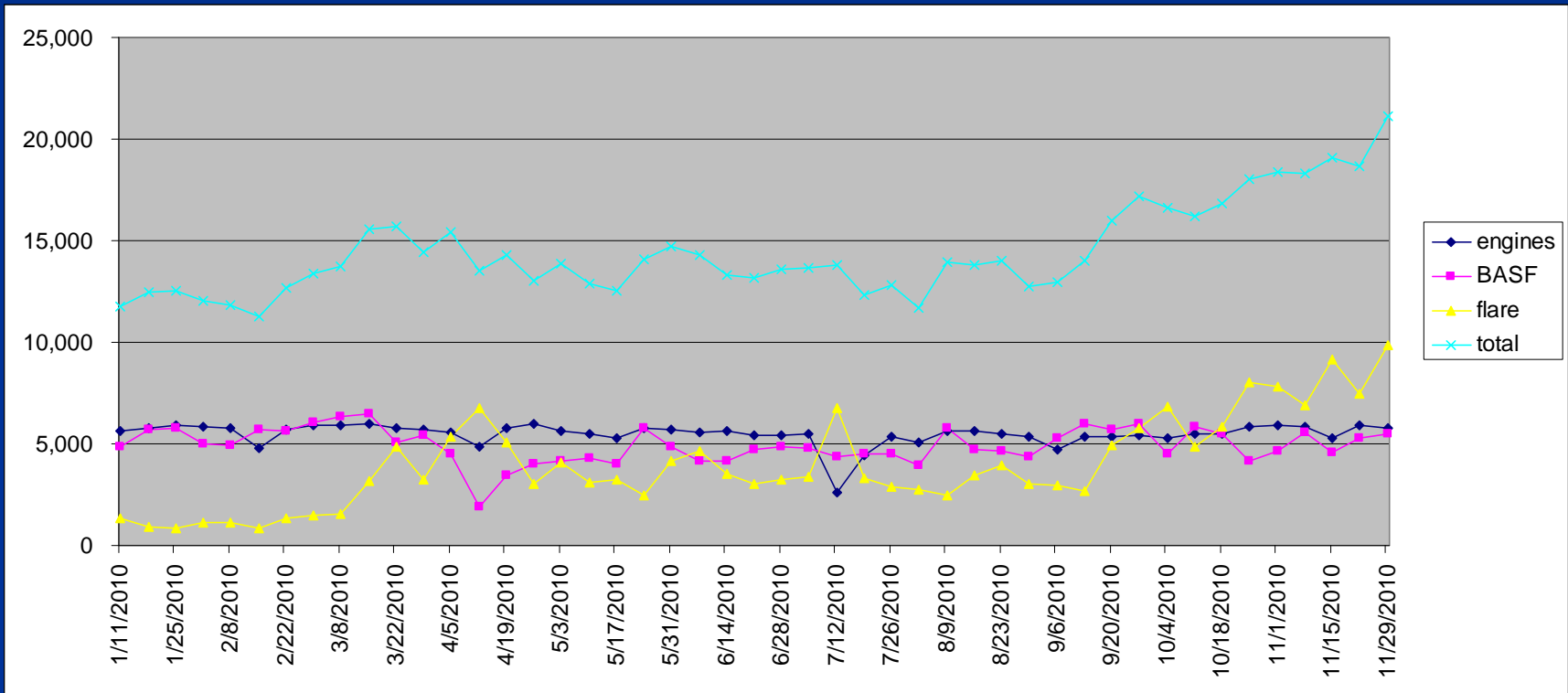
# What We Have Done and Continue To Do con't

- We conducted a temperature study in Cell V (\$42,000) to determine if more vacuum can be placed on the gas well field thus removing additional gas to be flared. Study is due in the February time frame.
- We continue to address erosion issues in a timely manner thereby insuring proper cover is on the landfill and additional gases don't escape.
- USEB (SEP) continues to increase the flow of gas from Cell VI, partially due to their efforts in addition to the additional cover that SPSA has placed thereon (see graph on following slide) Most of this gas is being flared.
- We continue to look for possible causes and sources but cannot find any one or two things that we can say with 100% certainty is a cause or source that we are able to completely control at this time. All the research we have performed shows that we are doing what others are doing or have done in similar situations.

# Discussions with DEQ on 1/13/2011

- Staff met with DEQ as a previously agreed follow-up to the Letter of Agreement that SPSA and DEQ entered into last year.
- This PowerPoint presentation was shown and discussed with DEQ.
- DEQ requested a letter be written to them for file purposes outlining the things that we've done and those things we anticipate doing along with a timeline by which we feel certain things can be accomplished. The letter was completed yesterday and ready to be mailed.

# Gas Being Drawn From the SPSA Regional Landfill





Ciba

Nansmond River

Sara Lee

QVC

Gas Pipeline

Gas Operation

Cells I - IV

LANDFILL

Cell VI

# Cell VI



Sara Lee

Gas Well

Top of Cell V

# Cell V – South Slope



# What We Plan To Do.

- Utilize an odorless neutralizer on a regular bases.
- Review data from Cell V temperature study.
  - To be completed in Feb. 2011
- If warranted by the temperature study we may propose to add additional cover to Cell V in specific areas.
  - If approved, install additional cover on certain areas (\$220,000 - \$600,000)
- Upgrade the flare at the gas plant (to be accomplished by SEP).
- Continue preventive maintenance on all vaults and cleanouts.
  - Completed in-house on a daily/weekly basis
- If deemed necessary and will provide needed relief review odor detection systems and discuss a possible engineered application for monitoring odor plumes at the landfill. This will tell us where odor was detected and the direction it was traveling.
  - Initial study ~\$2500, Full monitoring system \$250 - \$300K (not approved at this time)

# What If We Still Have Odor Issues?

- Move forward with evaluating the need to close a portion of Cell V
  - Cost of approximately \$7M (No guarantee that this will solve odor issues. Gases will likely migrate to that portion which is not closed.)
- Evaluate the need for a “rain cap” on a portion of Cell VI B (No guarantee that this will solve odor issues as long as part of the Cell is still in operational use.)

**OR**

# CEASE ACCEPTING WASTE OR CLOSE/MOTHBALL THE LANDFILL

- Cease accepting any type of waste at the landfill.
- Partially or fully close Cells V and VI (Full closure has a cost estimated to be \$15 million for the construction and \$6 million for post closure care of Cells I – VI for the required 30 year period)
- Seek Private Entity to operate the landfill under contract to SPSA
- Sell the landfill to a private entity or
- Close the Landfill and deed it back to the City of Suffolk as required by the Use and Support Agreement and SPSA will no longer be involved in or responsible for the Landfill or its operation.

Questions?

# Cell VII Update

The Cell VII permit application began in September 2007 (wetlands portion began in 2005).

The Part A application was approved in June 2008.

The Part B Application “completeness review” was approved in October 2008. Still waiting on “technical review” by DEQ Richmond.

The Regional Office of DEQ has approved SPSA’s application and forwarded it to the Richmond Office of DEQ. The contact persons are Don Brunson/Milt Johnston (local) and Jeff Steers (Richmond).

The Cell VII permit approval for setting a Public Hearing is in the hands of the Richmond Office of DEQ.

SPSA cost related to Cell VII are shown below:

Cell VII Permit	-	\$ 970,000 (not including current year)
Land	-	\$3,675,000 (352 acres – Cell VII, VIII, IX etc.)
Other Costs associated to land-		\$ 551,700

# Cell VII con't

The Public Hearing is to be held at the Hampton Roads Executive Airport if available.

Once the Public Hearing is held and the comments (oral and written) are considered by DEQ, a determination will be made as to whether the permit will be issued.

Following the Public Hearing will be a 45 day period before the permit can be issued.

Under a best case where the Public Hearing is held in the month of February, the earliest date the permit would likely be issued is in April.

If the permit is issued, SPSA will be able to use Cell VII for the disposal of waste.

If the permit is not issued, SPSA could choose to file an appeal with DEQ.