

**Below is a summary of steps already taken at Brown Middle School to alleviate the sewer gas odor.**

- A smoke test was performed on the entire sewer system. All plumbing fixtures and sewer system piping passed the test with the exception of three cleanout plugs in the kitchen area. Only two of the cleanout plugs required tightening whereas the third plug had to be replaced.
- The 2-acid traps were completely emptied of the reactive limestone chips and cleaned and disinfected. New reactive limestone chips were installed and the acid trap filled with water to establish a water seal.
- The kitchen grease trap was pumped-out and power washed. The grease trap was then filled with water to establish a water seal.
- EPISD Maintenance Department ran a camera through the school sewer system from the locker rooms, through the school and out to the front of the building. No breaks or deficiencies were found in the sewer system piping.
- The District's maintenance plumbing shop surveyed the sanitary vent system and found numerous "no hub" pipe clamps loose. All loose clamps were tightened.
- The El Paso Water Utilities installed a water seal at the school's connection to the sewer main to prevent sewer gases from the city main migrating back into the building.
- Two (2) exhaust fans serving the boys and girls locker rooms and two (2) exhaust fans serving the 1st and 2nd floor restrooms in the administration building were found not to be working. Corrective action was taken and all exhaust fans are now operational.
- Two defective motors were discovered in a fresh air unit in the vicinity of the administration area and in a heating unit in the gymnasium. The replacement motors have been ordered and are expected to be installed and operational by Jan. 9.
- An outside air duct connection in the administration area which was found to be disconnected was reconnected.
- A test and balance contractor performed additional testing and balancing of the supply and exhaust registers in the boys and girls locker rooms and in all building restrooms. The test results indicated the system is operating within + 10 percent of the design parameters which is well within industry standards.
- The original mechanical subcontractor, PA Contractors, replaced 105 gaskets on all toilet fixtures in the building to ensure they are free of any leaks.
- EPISD's environmental consultant, AMEC Earth & Environmental, has conducted air monitoring and air sampling for hydrogen sulfide. A Jerome 631-x hydrogen sulfide monitor was used to collect compound specific airborne concentrations. The maximum concentration registered was 0.029 parts per million (ppm) in the boy's locker room Coach's office. The monitor is still in place and registering any H<sub>2</sub>S concentrations.
- The results for the air sampling which was completed on Dec. 2, 2008, indicate that hydrogen sulfide concentrations were below the analytical detection limit. These results indicate a negative exposure assessment for Hydrogen sulfide, as defined by OSHA standards, has been achieved.
- Based upon the data reviewed to date, it appears that H<sub>2</sub>S concentrations within Brown MS are within the range where they are detectable (i.e. - the low odor threshold has been reached), but H<sub>2</sub>S concentrations have not been measured at a level that has been proven to cause harm to human life and health.
- No odors were reported the first day of school after the winter break, i.e. Jan. 7.

- The 14-exhaust fans in the main building and 6-exhaust fans in the gym/locker rooms were originally controlled via manual toggle on keyed wall switches. All 20- exhaust fans installed throughout the building have now been rewired to run automatically when all other air conditioning equipment is operational during building occupancy. The reason for the change is that all exhaust fans were not being turned on by the school staff when the building was occupied.
- Provided large and small individual air scrubbers with charcoal activated filters to help mitigate odors.
- The burn motors on the blower coil unit (BCU) in the gym and one fresh air unit (FAU) in one of the corridors has been replaced.
- The outside air dampers on the BCU have been adjusted to 30% minimum opening.
- Texas Department of State Health Services' Regional Industrial Hygienist and the Senior Toxicologist from Austin have visited Brown MS and conducted an investigation as to possible causes and risk to staff and students. Their reports have not been published yet.
- An environmental consultant with expertise in building infrastructure problems will be here to conduct an investigation on Wednesday February 18th.
- February 6, 2009, Maintenance plumbing department power washed the school's sewer line from the kitchen area all the way to the front of the school. During the power-wash, a pipe inspection was conducted using a video camera.
- Three commodes were leaking because of faulty gaskets. These were all corrected.
- Bio Remedies conducted another smoke test on Feb. 2; trap primers in floor drains at the cafeteria restrooms were found to be closed allowing the drains to dry out; Maintenance Department corrected this issue.
- PVC vent pipes were cut too short and did not have hub clamps. Maintenance Department and the plumbing contractor corrected these problems.
- Between Feb. 10-15, no odors were reported. Maintenance crews were working at Brown on Feb. 14 and did not report any odors.

**El Paso ISD and El Paso Water Utilities are working in conjunction to find the problem and correct it.**