

# Table of Contents

District Operations Staff	1
Working Hours	2
Call-in Procedure	2
Snow Days	3
Overtime	3
Absenteeism	4
Vacation Regulations	4
Disposal of District Property	5
Facilities Staff	5
Facilities Staff Relation to the Teachers	6
Making Out a Work Schedule	6
Cleaning Procedures	7
Chemicals	10
Summer Cleaning	11
Boiler and Mechanical Rooms	11
Snow Removal	11
Ice Melts	12
Building Checks	13
Vandalism	13
Emergencies	14
Glass Breakage	15
Mercury Thermometer Cleanup	15
Cleaning Up Broken Fluorescent Lamps	16
Maintenance Requests	17
Building and Grounds Usage	17
Roofs	18
Gasoline/Propane	18
Gas Pilot Lights	18
Bomb Threats	18
Outside Workers	19
Fire and Fire Alarms	19
Electrical	19
Power Outages	20
Energy Conservation Procedures	21
Weekend/Holiday Shutdown Checklist	22
Air Compressors	23
Boilers	23
Burners	23
Boilers-Hot Water	24
Boilers-Steam	24
Cleaning Boilers	26
Summer Procedure for Cleaning Boiler	26
Fuel Oil	27
Boiler Treatment Protection	27

Procedure to “Head Up” Steam Boiler	28
Procedure for Hydrostatic Testing	29
Use of Loose Soot Removal Tool	30
Maintenance Procedure for Roof Top Units	30
Heating and Ventilation	31
Exhaust Fans	31
Master Fans and Air Handlers	32
Univents	33
Pumps	33
Warehouse Personnel	34
Programs	34
Warehouse Responsibilities	34
Software	35
Delivery Process/Procedures	35



## **District Operations Staff**

671-4260

Chris Silcott—Director of District Operations

Mickey Gill—Coordinator of Maintenance and Warehousing

Tad Hopkins—District Architect/ADA Manager

Jodi Glascock—Office Manager

Linda Dowding—Administrative Assistant

Danny Brush—Trades Supervisor/Asbestos Manager

Ty Glascock—Facilities Supervisor

Kaleb Sargent—Assistant Facilities Supervisor

Randy Lynch—Grounds Supervisor

J.R. Frazee—Print Shop Manager

Shirley Lynch—Facilities Staff/Dispatcher

**WORKING HOURS** (See *Section 4.2 Working Hours-Board Policy GCJ* of the district employee handbook). Listed below is clarification and/or exceptions for Maintenance/Operations:

Each employee will follow the working hours as assigned by the Director of District Operations or the appointed representative.

Break Time - One (1) 15-minute break midway during the first half of the workday, and one (1) 15-minute break midway during the second half of the workday, or as directed by the immediate supervisor.

Lunch/Dinner Time – All full-time employees are provided with a 30-minute lunch break. This break should be taken midway through the workday or as directed by the immediate supervisor.

School Not In Session – Early shifts (those starting before 7:00 a.m.) will work their regular hours. All other shifts will work 7:00 a.m. - 3:30 p.m. unless otherwise directed by the Director of District Operations and/or an appointed representative.

Summer Hours - Will be reviewed prior to summer startup. Each employee will be notified of the current summer's working hours.

Emergency Calls After Hours – It is a condition of employment for all maintenance, warehouse, and facilities staff to respond to emergency calls after hours. If an employee does need to go to a location to take care of an emergency, it will be paid at time and one half of the employee's normal hourly rate. The employee will receive one-hour compensation, minimum, for responding if one hour or less if required to address the situation. Calls exceeding one hour will be paid for actual time on the job.

**CALL IN PROCEDURE:** When taking an employee leave (EL) day, a call to AESOP (1-800-942-3767) and to the District Operations office (816-671-4260) is required **EACH DAY**. **All early shifts (starting at 7:00 a.m. or earlier) must call in at least one hour before shift starts. All other shifts must call in by 7:00 a.m. A NO CALL NO SHOW could result in TERMINATION.** The answering machine is on all night for your convenience. Use the answering machine whenever possible.

When calling in absent, **a reason must be given**. You may not call and say that you will be “off” or that you’re taking a “leave day.” You must give one of the reasons listed under *EL Allowed Absences* of the district employee handbook.

When **RETURNING** from an EL day, a call to the District Operations office (816-671-4260) is required **EACH DAY**.

**You may not call in for vacation.** Short-term vacation requires 48 hours notice to your supervisor. Therefore, they are not an option when calling in for the same day or the next day.

If you are going to be late for any reason, you must call the District Operations office **as well as** the building in which you work. You must also call the District Operations office when you actually arrive at work.

If you need to leave during working hours for any reason, you must call the office at 671-4260.

Failure to comply with these procedures may result in disciplinary action, up to and including termination.

**SNOW DAYS** (See *Section 4.2 Suspension of Classes Due to Inclement Weather* of the district employee handbook). Listed below is clarification and/or exceptions for Maintenance/Operations:

1. Those that reported to work because they didn't know that all operations were ceased before the work day began will be paid for hours worked.
2. If a district-wide shutdown has been determined by the superintendent due to inclement weather, employees that have been called in to work for **snow removal** (grounds crew and facility staff) will be paid time and one half of their normal pay rate, with supervisor approval.
3. If operations are ceased *during* the work day, those staying to remove snow (facility staff and grounds crew) will be paid time and one half of their normal pay rate, with supervisor approval.

**OVERTIME** (See *Section 4.4 Overtime-Board Policy GDBB* of the district employee handbook). Listed below is clarification and/or exceptions for Maintenance/Operations:

Overtime (time calculated at time and one half) is any time worked over 40 hours in one week; however, you may not qualify for overtime just because you work more than 8 hours in one day or you work extra hours during the week. Overtime doesn't begin until you physically work 40 hours in one week. Therefore, extra hours that were worked during the same week that any type of EL day or vacation, bereavement, or wellness day or holiday were taken will be paid at straight time (time not calculated at time and one half), with the exception of \*emergency call-ins. These extra hours worked during the same week that any of the paid days listed above were taken will be paid at time and one half of the employee's normal pay rate.

*\*You have already gone home for the day (or it is a weekend), and a supervisor calls you in for an emergency.*

**Facilities Staff:** It is a condition of employment to help move snow when the need arises. If you are called to help move snow by a supervisor, it is mandatory that you respond.

**All overtime or emergency calls must have prior approval by a supervisor.** Facility staff: Any request to work overtime by the building principal **must be approved by either the facility supervisor or assistant facility supervisor.**

**ABSENTEEISM:** (See *Section 6 Employee Leave* of the district employee handbook). Listed below is clarification and/or exceptions for Maintenance/Operations:

All persons who have missed ten (10) or more days during the fiscal year (July 1-June 30) will receive a courtesy letter informing/reminding them the amount of days they have missed. This letter is not a formal reprimand. It is meant to help prevent possible future problems. All persons that miss 14 or more leave days will receive a 14-day letter. Your supervisor will evaluate all missed time when this letter is sent. We realize that sometimes there are extenuating circumstances, such as serious illness, surgery, or injury. These will be taken into consideration when missed time is reviewed. Remember, your annual leave time should be treated as accumulating short-term disability. It is wise to use it prudently.

An employee requesting three (3) or more consecutive days for personal illness will be required to submit a physician's statement with dates excused for his or her absence (or the date eligible to return to work).

**VACATION REGULATIONS:** (See *Section 6.2 Vacation Days* of the district employee handbook). Listed below is clarification and/or exceptions for Maintenance/Operations:

- Staff should stagger their vacation so the building is always manned.
- When taking three (3) days or less, 48 hours notice must be given
- When taking more than three (3) days, **ten (10) working days** notice must be given.
- Approval will depend on department work load and availability of other qualified personnel.

**EXCEPTION:** No **vacation or wellness days** will be permitted during the period from **ten (10) working days prior to the day school starts in the fall until ten (10) working days after the day school starts.**

- **NOTE:** When we work a different schedule in the summer, “eight (8) working days” will be understood to mean two (2) weeks (80 hours) of work.

**DISPOSAL OF DISTRICT PROPERTY:** All District assets are to be inventoried and traceable. Since assets are purchased using money that is state and local tax-based, assets deemed no longer useful have to be disposed of according to District Policy.

There are only two methods by which assets are disposed. If the asset has monetary value, it will be disposed of via public auction. If the asset has no value, it has to be placed into a solid waste container. **Items cannot be taken home**, even if the District has deemed it as no longer having any value. Failure to follow procedure can result in disciplinary action.

#### **FACILITIES STAFF**

The Facilities Staff should never forget that they are a representative of the school system. They should be the type of person parents would be willing to have associate with their children. To this end, they should be temperate in their habits and respectful to and cooperative with the teachers and principal.

#### **PERSONAL HABITS AND APPEARANCE**

The Facilities Staff member is frequently the first person whom visitors meet when they enter the school building. His or her appearance should be in keeping with dignity of the school. Clothing should be clean, neat, and in good repair at all times.

#### **GENERAL DUTIES AND RESPONSIBILITIES**

He or she should maintain the building in proper condition at all times. If any major work is being undertaken that is impossible to complete in a brief time, the principal and supervisor should be advised and an understanding reached as to when and how the work will be done in such a way and such time as to cause the least interruption to the instruction of students.

1. His or her keys to the building should never be loaned, and loss of any keys should be immediately reported to the principal and supervisor. When not on duty, building keys should be left in key box.

2. Tools and equipment should always be kept clean and properly stored and in useable condition. If feasible, they should be in a locked cabinet or locked room.
3. He or she alone should be responsible for the proper safe storage and use of the cleaning supplies allotted.
4. The Facilities Staff should never be sitting around a place of business during working hours. This is bad public relations. There is always something at the school that needs to be done if scheduling of time is done properly.

### **PHYSICAL EXAMINATIONS**

Please consult the current District's "Employee Handbook."

### **RETIREMENT**

Please consult the current District's "Employee Handbook" and your retirement system handbook.

### **THE FACILITIES STAFF RELATION TO THE TEACHERS**

The Facilities Staff and teachers have a joint responsibility in maintaining clean, attractive, and comfortable buildings. **A tactful** Facilities Staff should be able to secure cooperation of the teachers in teaching pupils not to bring dirt into the building, to avoid scattering paper on the floor or grounds, and in preventing the marking and marring of walls of the building.

### **MAKING OUT A WORK SCHEDULE**

The first step in making out a schedule is to list all duties. These should be arranged in the approximate order of their daily performance, then rearranged, if necessary, to form the most suitable plan. Opposite each item or duty, list the time frequency of performance, such as daily, twice daily, weekly, and so on. Consideration must be given to those jobs which must be done only before the school day begins; those which have to be done during the school period; those which can only be done after school; and those which can be done at any convenient time during the day.

A sample of the work schedule might look like this:

6:00-6:15	Fire boiler
6:15-6:30	Unlock doors
6:30-7:30	Clean rooms 10,11,12,13,14, and 15
7:30-8:00	Clean boys' restroom on main floor
8:00-8:15	Break
8:15-9:00	Sweep stairwells and hallways
9:00-9:15	Clean girls' restroom on main floor
9:15- 9:30	Clean Music room
9:30-10:00	Vacuum door mats at all outside doors and clean glass
10:00-10:30	Lunch
10:30-10:45	Check restrooms, fill paper towels if needed



10:45-11:00	Set up gym for lunch and get mop water ready, push milk cooler into gym
11:00-11:30	Sweep halls
11:30-11:45	Empty trash from lunchroom after first lunch
11:45-12:00	Check grounds and pick up trash
12:00-12:30	Put up tables, sweep gym floor and mop, empty lunch trash
12:30-1:00	Clean stage and dust hallways
1:00-1:15	Break
1:15-1:30	Check restrooms
1:30-2:30	Clean boiler room, miscellaneous items
2:30	Return keys to key box and go home

Frequent reexamination of the schedule may reveal one or more ways to save time for a given sequence of operations. It may point out some job that is being omitted or a saving of effort by combining jobs in nearby areas instead of having to go from one area to a distant one and then back-tracking. Every change should result in improvement in the work effort. The main thing to work out is a schedule which will show all the jobs to be done and when they should be done so there will be no waste of time and effort, no particular job missed, and so that the job will be done at times that are suitable and convenient.

After the schedule is more or less worked out and fixed, the principal and supervisor should be given a copy of it. This serves the double purpose of permitting the principal and supervisor to comment on it or approve it as satisfactory.

### **CLEANING PROCEDURES**

**HALLWAYS** should be swept with a treated dust mop, seeing that the outer edges, corners, underneath lockers, cabinets, radiators, and the like are swept with an angled broom.

HIGH SCHOOLS - each hour

MIDDLE SCHOOLS - each hour

ELEM. SCHOOLS - at least three times a day

**HALLWAYS** should be spot-mopped with a wet mop as needed. Hallways should be buffed with a high-speed buffer at least once a week. Trash in hallways needs to be picked up continually throughout the day.

**STAIRWAYS** should be swept down with an angled broom and mopped at least once per day, more if needed. Railings in stairways should be wiped down with germicidal cleaner each day.

**BLOOD AND BODY FLUID CLEAN UP:** Spill containment kits will be kept in accessible areas throughout each building for cleanup (nurses' office, main office,

boiler room, and other areas to be determined by individual buildings). The building engineers will order supplies as needed for kits.

SPILL CONTAINMENT KITS must be available during all sporting events (area of location to be determined by building). School nurses will be responsible for training all personnel in their buildings on the proper handling of body fluid.

SUPPLIES IN SPILL CONTAINMENT KITS:

- EPA approved disinfectant spray (1 can)
- Absorbent floor sweep material (5 bags)
- Disposable vinyl\plastic gloves (5 pair)
- Disposable paper towels (1 lg. roll)
- Plastic trash bags (5 red\5 tan)
- Cardboard 8.5 x 11.5, replaces dustpan (10 cards)

PROCEDURE FOR USING SPILL CONTAINMENT KITS:

1. Open kit – remove necessary supplies for cleanup.
2. Put on disposable gloves.
3. Open absorbent pack – Sprinkle contents evenly over the body fluid spill and allow time for absorbent to work.
4. Open and prepare red and tan plastic trash bag so contaminated materials can be discarded with a minimum of handling.
5. After absorbent has set (3-5 min.), take two (2) 8.5 x 11.5 cardboard pieces and scoop up the absorbent material. Discard absorbent material and cardboard in red plastic bag.
6. Spray disinfectant (Steriphene II) over spill area. Sprayed surface should remain wet for 10 minutes.
7. Using disposable paper towels wipe up all the disinfectant and discard in red plastic bag. Tie red plastic bag securely and place in the second tan trash bag.
8. Carefully remove disposable gloves and place gloves in tan plastic bag and tie securely.
9. Wash your hands with soap and water immediately upon completion of cleaning up body fluid spill (even though you have worn gloves). Wash hands thoroughly for 10-15 seconds.
10. Take securely tied trash bag to dumpster.

GRAFFITI should be removed daily.

DUSTING: All parts of the school building and equipment should be regularly dusted: desk, tables, chairs, doors, chalk trays, radiators, window sills, transoms, maps, clocks, furniture, light fixtures, fans, lockers, fire extinguishers, pipes, etc. There is always something to dust.

WINDOWS: Classroom door windows and front entrance door windows should be cleaned at least once a week, more if needed. Cleaning windows is like dusting; there is always some glass that needs to be cleaned.

DRINKING FOUNTAINS should be cleaned daily with a germicidal, using stainless steel cleaner on the stainless steel drinking fountains.

ENTRANCE MATS should be vacuumed daily, seeing to it that the floor is cleaned under them.

CAFETERIAS serving breakfast should be spot-mopped and trash emptied. After lunch is served, cafeterias will be wet-mopped completely and trash emptied.

GYMS should be swept daily, seeing to it that the corners are clean, and wet-mopped as needed. During basketball games, it may be necessary to dust-mop between games for safety reasons.

STAGES should be swept and cleaned regularly. If they are in use for a classroom, then daily cleaning is required.

CLASSROOMS should be swept with a treated dust mop daily and all trash cans emptied daily. Classrooms should be dusted once a week, dusting any flat surface that might collect dust, and spot-mopped as needed.

CLASSROOM CARPETS should be vacuumed daily, with the exception of scrap pieces that have been brought in by teachers; vacuum them twice a week.

BLACKBOARDS\WHITEBOARDS should be cleaned at least once a week.

WOODCHIPS should be raked in under the playgrounds as necessary. This is for safety reasons and to keep them from washing away.

RESTROOMS AND SHOWER ROOMS should be wet-mopped daily with disinfectant. Do not sweep restrooms with dust mop; sweep with an angled broom. Sinks should be cleaned daily with a germicidal cleaner, mirrors should be cleaned daily. Stools should be wiped down daily with a germicidal cleaner and cleaned once a week with toilet bowl cleaner; use only on porcelain bowls and urinals. Restrooms should be checked often, flushing stools and urinals and checking paper towels and toilet tissue. Make sure that soap is available for washing hands.

STAFF RESTROOMS AND CLASSROOM RESTROOMS should be treated the same as all other restrooms.

DRAIN TRAPS should be kept full of water to keep sewer gas from entering building.

MOPS AND BROOMS shall be hung or set with handle down. Do not let wet mops sour; store in a well-ventilated area. Keep brooms and mops clean and free of lent.

GROUNDS shall be walked daily to remove all trash. Keep sidewalks free from mud, sand, rocks, grass clippings, snow, and ice melt. This will help keep your building safe and clean. It will also add to the appearance of your building.

GREASE TRAP should be checked each month and cleaned if necessary.

EMPTY CONTAINERS should be sent back to the warehouse. This means all empty plastic buckets and jugs; we reuse them.

FACILITIES STAFF should continue with their daily duties while supervisory personnel are in the building unless otherwise requested by the supervisor.

FACILITIES STAFF will, upon request of maintenance employee, help said employee for a short period of time.

SECURING BUILDING: The last person in the building is responsible for locking the building. Allow yourself time to check all outside doors to make sure they are locked. Sometimes it is better to walk around the outside of the building to check for open windows. Make sure all lights are off, and check the boiler during the heating season to make sure they are on the proper setting. Make sure the alarm is set before leaving the building.

SPECIAL NOTE: It is the responsibility of special education personnel to dispose of students' potty-chair waste, soiled diapers, and to maintain cleanliness of the potty chairs. We will rely upon the facility staff to provide us the necessary materials and equipment to handle/dispose of the waste in a sanitary fashion.

### **CHEMICALS**

1. For protection of children, keep ALL chemicals, such as boiler compound, drain cleaner, and cleaning agents locked in storage cabinets AT ALL TIMES! If your school has no facilities for this, advise the Housekeeping Supervisor.
2. For fire prevention, keep all flammable materials away from boilers, gas water heaters, or any other source of heat or sparks. Keep these locked in a fireproof metal cabinet at all times. If your school has no such facility, write a Maintenance Request for one.
3. Chemicals that are not allowed in any drains are: Solvents, Paint, Paint Thinners, Gas, Oil, and Antifreeze.
4. Sanitary Drains-These are drains that are located inside the building. Our Hillyard products that we use are UL approved and are formulated to be sanitary drain-safe; however, they are not allowed in storm sewers.
5. Storm Sewers-these are drains that are located outside of the building. Under no conditions are any chemicals allowed in these drains. There is a City Ordinance that does not allow anything but rainwater to be put in these drains.

If you have any questions, call the District Operations office at 671-4260.

### **SUMMER CLEANING**

1. NO scrub gangs. People stay in their own building except when assigned to special details.
2. Extra help will be supplied as needed and as available.
3. Gym gangs will do WOOD gym floors.
4. When using FLAMMABLE products, turn OUT all pilot lights and work in well-ventilated areas.
5. Kitchen exhaust hoods will be cleaned inside and out. Clean reusable filters.
6. In high schools, the engineer will do the following:
  - Organize the summer cleaning schedule.
  - Clean the boiler.
  - Clean the boiler room.
  - Do all cleaning and lubricating of motors, univents, filters, etc., as set forth in this manual.
  - If possible, assist in clean-up of building.
7. In elementary and middle schools, the engineer will do the following:
  - Organize the summer clean-up schedule.
  - Clean the boiler.
  - Clean the boiler room.
  - Do all cleaning and lubricating of motors, univents, filters, etc., as set forth in this manual.
  - Assist in building clean-up.

### **BOILER AND MECHANICAL ROOMS**

The boiler room should be as clean as any room in the building. It should be swept daily and trash removed. If possible, there should be an area specified for storage of maintenance materials, such as lumber and touch-up paint so as not to have them scattered all over the boiler room and building.

Boiler rooms and mechanical equipment rooms are NOT to be used for storage areas except for maintenance equipment. Educational equipment SHALL NOT be kept in these areas! The engineer shall be held responsible for these areas and shall report any violations to the District Operations office.

### **SNOW REMOVAL ASSIGNMENTS**

#### **1. Small Snows (1 inch or less)**

- Engineers and custodians will be responsible for all snow removal from steps and ALL sidewalks using hand shovel, broom, or snow blowers. After clearing, apply ICE MELTS as needed. Parking lots and drives will not be cleared. Application of ICE MELTS and sand to the drives and lots will be done by grounds personnel as needed. Use sand only in emergency situations, such as new concrete or with other special instructions.

#### **2. Medium Snows (1 to 4 inches)**

- Engineers and custodians will be responsible for all snow removal from steps and ALL sidewalks, using hand shovels and snow blowers. After

clearing, apply ICE MELTS as needed. Parking lots and drives will be cleared by the snow removal equipment. (We clear NO playground areas.) Grounds personnel will clear drives, applying ICE MELTS and sand to steep drives as needed. Use sand only in emergency situations, such as new concrete or with other special instructions.

### **3. Large Snows (4 inches and more)**

- Engineers and custodians will be responsible for clearing steps and area sidewalks. Apply ICE MELTS as needed. The trucks will be used for snow removal on all areas not covered by Engineers and Custodians. Use sand only in emergency situations, such as new concrete or with other special instructions.

- 

### **SNOW REMOVAL**

Keep walks clear. Both engineers and custodians are responsible for all snow around the building that the large tractor cannot remove.

Get an early start on snow removal if at all possible. Once the snow gets packed down, the snow blowers will not remove all of the snow, and hand shoveling might be required.

### **ICE MELTS**

#### **1. Spreading**

- Only a small amount of concentrated Ice Melt is needed to effectively melt ice and snow. Use 1 cup (1/4 lb.) per sq. yard or 114 grams per sq. meter. Spread evenly; avoid piling and over spreading. For best results, shovel off resulting slush and water. Reapply when needed.

#### **2. How and When to Use**

- Apply early to melt ice or snow as it falls; apply ice melt prior to any accumulation. During sleet and freezing rain, apply early to prevent ice buildup and bonding. For large accumulation, clear excess snow, spread on stubborn ice or packed snow.

#### **3. About Concrete**

- Melting agents lower the freezing point and may increase the number of freeze/thaw cycles. Melted ice or snow may seep into cracks and porous surfaces and expands when frozen, which may result in spalling or scaling of various surfaces. Good quality air-entrained concrete for cold weather climates as specified by the Portland Cement Association is less susceptible to the freeze/thaw cycle than lesser-quality concrete. This ice melting product does not chemically attack surfaces and as such does not cause surface damage. Surface damage is the direct result of the freeze/thaw cycle. The potential for surface damage caused by the freeze/thaw cycle can be decreased by sealing surfaces and by removing slush that results from melting.

#### **4. Other Surfaces**

- Avoid the use of ice melt on vulnerable surfaces, such as masonry (stone or brick); mortar joints; precast steps; wood; concrete that is less than 1-year-old; or surfaces that have exposed aggregate, is precast, pre-stressed, chipped, cracked, spalled, or weathered.

#### **BUILDING CHECKS**

School Engineers are required to check their buildings starting on the first Sunday in November and continuing through the last Sunday in March. These checks are to be made between the hours of 1:00 p.m. and 2:00 p.m. The District Operations office will be open, and help will be available during that hour. If temperatures are forecasted to drop to 15 degrees or below and remain at that level for a period of 24 hours or more, all heat plants will be left on “Day Run.” Additional building checks for Saturdays and/or holidays will be required between the hours of 1:00 p.m. and 2:00 p.m.

**NOTE:** If the building is in use during the morning or afternoon the day of the check, it will not be necessary to recheck between 1:00 p.m. and 2:00 p.m.

Checks should include but not be limited to:

1. All exterior doors and windows closed and locked.
2. Signs of vandalism.
3. Heat plant and all equipment.
4. Broken, leaking, or frozen water lines.
5. Gas leaks.
6. Kitchen equipment—Refrigerators, freezers, stoves, ovens, steam tables, and water heater pilot lights.
7. All interior lights out.
8. Exterior night lights turned on if they are to be left on.

If problems are found and you need help to correct, call 671-4260 between 1:00 p.m. and 2:00 p.m. on Sundays. On any other day, use the emergency call list.

#### **VANDALISM**

##### **1. What is vandalism?**

- Any equipment inside or outside the school building, OR any part of the building or grounds which is broken or damaged by other than normal wear is classified as VANDALISM!

##### **2. How do you report vandalism?**

- All Maintenance Requests for replacement or repair of all such items should be done on the online request form in SchoolDude.

##### **3. What can we do to help keep down vandalism?**

- NEVER LOAN YOUR KEYS TO ANYONE! Go with them and unlock any door and re-lock as soon as possible.

- Report any rough treatment of equipment to the teacher or principal at once.
- Make a thorough building check of all doors and windows before leaving your building unoccupied!
- Secure roof hatches from the inside.
- Ask any strangers on school property during the day for identification.

### **EMERGENCIES**

For **ALL** emergencies during the day, call the District Operations office at 671-4260.

The office will be open from 7:00 a.m. to 3:30 p.m. for emergency calls during the days that school is in session. During the summer months, the office will be open one (1) hour before starting time through the close of the working day. Reports of sickness, **excused** request from work, etc., may be handled from the office during these hours.

The answering machine will take the telephone message when there is no one at the office. After you dial the number wait for the message to end.

EXAMPLE: Recording signal stops. "This is John Doe, Benton High School, April 17<sup>th</sup>, 6:00 a.m. I will be unable to work today because of illness."

### **After Hours**

When an emergency arises after working hours, nights, Saturdays, Sundays, or holidays that has to be taken care of immediately and cannot be put on the answering machine because of the time delay in action, contact your immediate supervisor or the on-call personnel at 913-426-5460 or 816-341-9128.

### **Guideline List of Emergencies:**

1. Sickness or unable to work (**see Call-In Procedure; Section 1, page 1**)
2. Mechanical equipment
  - Burners, fans, any heating or cooling equipment
  - Thermostats (room too hot or too cold)
  - Sewers stopped up, water leaks, steam leaks, air leaks
3. Break-in at school
  - Notify the police 271-4789
  - Notify the principal
  - Notify the District Operations office 671-4260
4. \*Glass Breakage (that cannot be boarded up to secure the building)
5. If a glass is broken during school hours, please remove glass if there is danger to the students or staff.

NOTE: Do not call Maintenance staff who work on specific equipment. They will be notified by the appropriate supervisor.



**\*GLASS BREAKAGE**

When broken window glass or outside door glass is discovered on the lower level where entry can be easily gained, call the on-call personnel at 913-426-5460 or 816-341-9128.

**MERCURY THERMOMETER CLEANUP****A. Before Cleanup****\*Contact Your Supervisor**

1. Have everyone else leave the area; don't let anyone walk through the mercury on their way out. Open all windows and doors to the outside; shut all doors to other parts of the school.
2. Do not let students help with cleanup.
3. Mercury can be cleaned up easily from the following surfaces: wood, linoleum, tile, and any similarly smooth surfaces.
4. If a spill occurs on curtains, upholstery, or other absorbent surfaces, these contaminated items should be thrown away in accordance with the disposal means outlined below. Only cut and remove the affected portion of the contaminated surface.

**B. Items Needed For Cleanup**

1. 4-5 zip loc-type bags
2. trash bags (2 to 6 mils thick)
3. rubber, nitrile, or latex gloves
4. paper towels
5. cardboard or squeegee
6. eyedropper
7. duct tape
8. flashlight

**C. Cleanup Instructions**

1. Put on rubber, nitrile, or latex gloves.
2. If there are any broken pieces of glass or sharp objects, pick them up with care. Place all broken objects on a paper towel. Fold the paper towel and place in a zip lock bag.
3. Locate visible mercury beads. Use a squeegee or cardboard to gather mercury beads. Use slow sweeping motions to keep mercury from becoming uncontrollable. Take a flashlight, hold it at a low angle close to the floor in a darkened room, and look for additional glistening beads of mercury that may be sticking to the surface or in small cracked areas of the surface. Note: Mercury can move

- surprising distances on hard-flat surfaces, so be sure to inspect the entire room when "searching."
4. Use the eyedropper to collect or draw up the mercury beads. Slowly and carefully squeeze mercury onto a damp paper towel.
  5. Place the paper towel in a zip lock bag and secure. Make sure to label the bag as directed by your local health or fire department.
  6. After you remove larger beads, put shaving cream on top of small paint brush and gently "dot" the affected area to pick up smaller hard-to-see beads. Alternatively, use sticky tape, such as duct tape, to pick up any remaining small glass fragments. Place the paint brush or duct tape in a zip lock bag and secure.
  7. Remember to keep the area well ventilated to the outside (windows open and fans in exterior windows running) for at least 24 hours after your successful cleanup. Continue to keep students out of cleanup area.

### **CLEANING UP BROKEN FLOURESCENT LAMPS**

#### **A. Before Cleanup**

##### **\*Contact your Supervisor**

1. Air out the room for 5-10 minutes by opening a window or door to the outdoor environment.
2. Shut off the central forced air heating/air-conditioning system, if you have one.
3. Collect materials needed to clean up broken bulb:

\*stiff paper or cardboard;

\*sticky tape;

\*damp paper towels or disposable wet wipes (for hard surfaces);  
and \*a glass jar with a metal lid or a sealable plastic bag.

#### **B. During Cleanup**

1. Do not use a vacuum: A vacuum could spread mercury containing powder or mercury vapor. After all other cleanup steps have been taken it is ok to use a vacuum to collect remaining glass.
2. Be thorough in collecting broken glass and visible powder. Scoop up glass fragments and powder using stiff paper or cardboard. Use sticky tape, such as duct tape, to pick up any remaining small glass fragments and powder. Place the used tape in the glass jar or plastic bag.
3. Place cleanup materials in a sealable container.

**C. After Cleanup**

1. Promptly place all bulb debris and cleanup materials, including vacuum cleaner bags, outdoors in a trash container or protected area until materials can be disposed of. Avoid leaving any bulb fragments or cleanup materials indoors.
2. Continue to air out the room where the bulb was broken and leave the heating/air conditioning system shut off for several hours.

**MAINTENANCE REQUESTS**

Any request for repairs of building, grounds, or equipment should be submitted via the SchoolDude program. **EACH REPAIR REQUEST NEEDS TO BE LISTED SEPARATELY.**

When filling out an online request form, complete details should be given regarding the trouble, location, etc. When the trouble is an emergency, the District Operations office should be called immediately (671-4260). An online request should still be submitted by the requesting staff member. **Only emergency items should be called into the office.**

**REPAIR OF PORTABLE EQUIPMENT IN BUILDINGS:** State the necessary repair in detail on the online request form in SchoolDude. Upon receipt of the request, someone will be sent to pick up the item to be repaired. When the repair is completed, the item will be returned. It is preferable that the engineer or custodian not leave the building to drop these items off at the repair station.

**BUILDING REPAIRS:** State in detail the work that is needed to be done on the online request form in SchoolDude. All requested work will be completed in a timely manner. If it is repair work that is to be done by the Carpenters that rotate to your building, the request needs to be sent to your building Carpenter.

**REQUEST FOR USE OF FOLDING CHAIRS, TABLES, ETC:** State the date such equipment will be needed, what event it will be used for, and the location within the building (room number) on the online request form in SchoolDude, and send the request to the Warehouse. State the date that it is to be picked up and returned to storage on the same request.

**REQUEST FOR REPAIR OF VANDALISM:** State in detail the work that is needed to be done on the online request form in SchoolDude. For all emergencies, call the District Operations office at 671-4260 immediately.

NOTE: ALL requests other than repairs of or to existing equipment and buildings must be signed by the principal.

**BUILDING AND GROUNDS USAGE**

Students will not be admitted into the school unless a building principal, teacher, or an adult supervisor is on duty.

Playgrounds are open for public use any day of the week during daylight hours only. The following will not be allowed on playgrounds:

1. The playing of or with a hardball.
2. The driving of go-carts, cars, motor scooters, motorcycles, motor airplanes, or any other gas-powered unit over the playground surface or other parts of the school grounds.
3. No parking on playground by any school employee or patron, unless permission has been given from the District Operations office.

The school engineer/custodian working with the building principal will be responsible for keeping the above items off the playground during the time they are on duty at the school site.

## **ROOFS**

### **Inspections**

Inspect the building roof at least ONCE per WEEK! Look for clogged roof drains, splits in the roofing, pulled or torn flashing, bubbles or soft spots on the roof, and damage due to weather or vandalism. Be careful where you step on the roof. Do not step on bubbles in the roofing. Stay away from the flashings (the areas on the outside edge).

### **Reporting Problems**

Turn in a request via the SchoolDude program. Phone in any emergency situations.

## **MISCELLANEOUS**

### **1. Gasoline/ Propane**

- For fire prevention, keep all gasoline away from boilers, gas water heaters, or any other source of heat or sparks. Keep gasoline locked in fireproof metal cabinets at all times. If your school has no facility for this, write a Maintenance Request.

### **2. Gas Pilot Lights**

- Maintenance staff should shut off gas pilot lights on steam tables, kitchen stoves, and any other kitchen equipment not in use for the summer vacation. Do this promptly after school is out. These should be re-lit BEFORE the kitchen workers return in August. The same procedure should be used for Home Ec and Industrial Arts shop equipment.

### **3. Bomb Threats**

- What is the responsibility of the principal?
  1. Verbally announce coded alarm to evacuate building.
  2. Evacuate building immediately.
  3. Use predetermined route for evacuation to safe zone.
  4. Teachers will be last ones out of classrooms.

5. Call Police, 911, or 279-3931.
6. Call Superintendent's Office, 671-4000.
7. Call Maintenance Department, 671-4260.
8. All evacuated buildings will be under the jurisdiction of the fire and police departments until the building is declared safe.

#### **4. Outside Workers**

- The District Operations office must be called at any time there is someone other than a District employee in the building to do some specific work.
- This information is needed by the Director and/or his Assistants in order to keep abreast of jobs under contract.
- **NOTE: BECAUSE EPA REQUIRES SPECIAL INSTRUCTION FOR WORKERS WHO ENTER AREAS CONTAINING ASBESTOS, THIS ITEM BECOMES VERY IMPORTANT.**

#### **5. Fire and Fire Alarms**

- **Smoke or Fire**
  1. Pull Fire Alarm nearest pull station.
  2. Evacuate the building to the Safe Zone.
  3. Dial 911.
  4. After evacuation, notify the Administration Office 671-4000. Instruct Teachers and Staff to account for students at Safe Zone.
  5. Teachers/staff will be the last ones out of the building.
  6. Fire Department will determine if and when building is safe to reenter.
- **Small Fire**
  1. Check building for source of fire.
  2. If fire is small and can be extinguished – DO SO!
  3. If fire is beyond “small,” follow above procedure, shut off all equipment, and leave the building.

#### **6. Electrical**

- **Electrical lighting & receptacle**
  1. When a light is out, replace the lamps before calling District Operations. Make sure that when replacing fluorescent lamps the switch is off. When row lights are out or receptacle is not working, check for fuse or tripped breaker. Reset breaker or replace fuse. Then call District Operations if still not working (671-4260).
  2. When lights & receptacles are out in different parts of the building, call District Operations at 671-4260.
- **Electrical Equipment**
  1. **Motors**
    - Q. Do engineers grease electric motors?

A. YES, once per YEAR. Use grease gun with care - over lubrication is just as harmful as not enough lubrication.

Q. What type of grease is used on electric motors?

A. Lubriplate 930-2

## 2. Exit Lights

- All exit lights should be ON at all times.

## 3 Procedure to Test for Faulty Fuses and Switches:

- Check for faulty “plug-type” fuses:
  - You should be able to find a defective plug fuse by looking in clear plastic window on front of fuse. You can see link burned in the middle. If window is completely black, the fuse is very possibly bad.
- Always have the power OFF when replacing either “plug” or “cartridge” type fuses.
- Always have power OFF when replacing light bulbs.
- Use FUSETRONS only on circuits supplying power for electric motors. Fusetrons are identified by the name “Fusetron” or the letters “FRN” printed on the label.
- Use only Buss One Time\* fuses (not Fusetrons) on circuits which do not supply power to electric motors. Example: Room outlets and lighting circuits.
- When replacing fuses, always use same size “amp” rating and fuse type. Examples: If you remove a 10 amp fuse (Buss One Time), always replace with a 10 amp fuse (Buss One Time).
- Check fuse boxes for fuse types needed in your building. Order from District Operations no more than one (1) box of each type fuse or Fusetron that you will need. You may order fuses over 60 amp to have on hand if we need to replace one for you (one or two of each will be enough).

\***Buss One Time** fuses are **quick** to burn out when overloaded and are good for use only once.

## 7. Power Outages

- What do you do if power goes off all over the building?
  - Turn **off** all mechanical equipment: air compressors, air handlers, boiler burners, rooftop units, and etc.
  - Call the District Operations office at 671-4260.
- What do you do when power is restored?
  - Turn all electrical equipment back on.
  - Check to see if electrical equipment has returned to normal.
  - If electrical equipment doesn't run properly:

- Push motor reset on motor starter.
  - Check breaker reset.
  - Check fuses and replace.
  - If equipment is not working, call District Operations 671-4260.
- What do you do if building electrical power goes off in different parts of the building?
    1. Turn **off** all mechanical equipment: air compressors, air handlers, boiler burners, rooftops, and etc.
    2. Call District Operations (671-4260).
    3. When electrical power is restored:
      - a. Turn all electrical equipment back on.
      - b. Check to see if electrical equipment returns to normal.
      - c. Push motor reset on motor starter.
      - d. Check breaker reset.
      - e. Check fuses and replace.
      - f. If electrical equipment is still not working, call District Operations at 671-4260.

## **8. Energy Conservation Procedures**

### **a. Morning- Open**

- Lighting raised to minimal safe/secure passage until scheduled student arrival.
- Outside night security lighting is turned off.

### **b. Morning Transition**

- Cafeteria lighting used only for areas where students need to sit.

### **c. Student Occupied Hours**

- Classroom lights turned off when unoccupied.
- When unoccupied or not scheduled to be used (auditorium, cafeteria, and gym), lighting and air conditioning is off.
- Cafeteria lighting is off between breakfast and lunch. Stage area is used only for classes/activities that require a theatrical setting.
- Work orders are promptly turned in for water leaks and security lights which remain on during daylight hours.
- Lighting reduced in areas/hallways where plentiful natural lighting is available.

### **d. Afternoon Transition**

- Cafeteria lighting is off after cleaning is completed.
- Hall lighting reduced after students leave school.
- Outside doors and windows closed.

### **e. Last Activity/Special Function**

- Lighting is off after space is unoccupied.
- Any hand-operated heating or air conditioning equipment is turned off after activity.

**f. Daily Closing**

- Turn lights on only in area being worked.
- Trophy case lights, restroom lights, and exhaust fans are shut down daily.
- Air handlers off when building is unoccupied.

**g. Guiding Rules**

- Classroom temperature should be between 68 degrees and 72 degrees; hallways are 65 degrees.
- Do not interfere with classroom instructional program.
- Do not light areas that are not in use.
- Do not heat or cool unoccupied areas.
- **Do** establish and practice equipment shut down procedures for daily and holiday savings.

**9. Weekend/\*Holiday Shutdown Checklist**

- **Between 1:00 – 2:00 p.m.**
  1. Turn OFF cafeteria lights.
  2. Turn OFF all cafeteria equipment.
- **Between 3:00 – 4:00 p.m.**
  1. Turn OFF all auditorium lights. Turn OFF all gymnasium lights.
  2. Check all classroom lights.
  3. Ceiling fans OFF.
  4. Running water in urinals OFF.
  5. All unnecessary equipment OFF and UNPLUGGED.
  6. \*All doors to bathrooms PROPPED OPEN.
  7. \*All cabinets with access to plumbing should be left OPEN throughout the building.
  8. All lights turned OFF.
  9. Unnecessary kitchen equipment turned OFF.
  10. Check security lighting (OFF in daytime).
  11. Check security lighting time clocks.
  12. Report any commodes which run water constantly.
  13. \*Hot water circulating pumps turned OFF.
  14. \*Convection cookers turned OFF.
  15. Air conditioners turned OFF.
  16. Office machines turned OFF.
  17. Lights OFF in unoccupied areas.

\*Should be used on Thanksgiving, Christmas, Easter, and other long weekend holidays.



**NOTE:** The above is not inclusive. Please use your own judgment and consult with your building principal to improve your energy conservation

### **AIR COMPRESSORS**

1. How often should the tank be “blown down?”
  - TWO times each week. Use the bottom blow down valve.
2. How often should the oil level be checked?
  - ONCE each week. Use Lubriplate AC-3V oil to keep the compressor to the full mark.
3. Do engineers change the crankcase oil?
  - NO!
4. How can the oil in an open can be kept clean?
  - Keep every open can capped at all times with a plastic coffee can cap. Notify the District Operations office if your school has none.
5. How often should the safety valve be popped?
  - ONCE each week.
6. When must the air compressor be running?
  - Compressor MUST BE ON if univents, air handlers, or any type of heating and ventilation equipment are in operation, regardless of the weather.
7. Must the compressor be on for air conditioning?
  - ONLY for central air conditioners, NOT for window units.
8. During the heating season, what will happen to all room temperatures if air compressor is OFF, or a valve is closed in compressed air supply line?
  - ALL room temperatures will RISE that are controlled by pneumatic steam valves resulting in sprinkler system being activated where one exists.

### **BOILERS**

- **Burners**
  1. When using fuel oil, how often should burner nozzles be cleaned?
    - ONCE per day.
  2. How often should lubrication oil in burners be checked?
    - ONCE every day, first thing in the morning! Burners must be OFF. Never check or add oil while burner is running. Fill to 1/8” from top of cap.
  3. What is used for cleaning burner tips and entire surfaces of burners?
    - AMASOL or STANSOIL.
  4. How often do engineers wipe off burner ignition points?
    - Do NOT touch!
  5. How often do engineers clean fireeye scanner bulb?
    - ONCE per day when burning oil or gas.
  6. Do engineers change burner lubrication oil?
    - NO!
  7. How often should engineers wipe off burner surfaces?
    - DAILY!
  8. How often should engineers clean burner drip pans?
    - DAILY!

9. How often should oil and refuse be cleaned from burner pit?
    - DAILY!
  10. When should failures of burners, boilers, or related equipment be reported to the District Operations office?
    - IMMEDIATELY!
  11. What type of lubrication oil is used in burners?
    - Lubriplate #3.
  12. When should engineers switch from gas to oil in severe winter weather?
    - ONLY if contacted by the District Operations office or the Gas Service Company.
- **Boilers – Hot Water**
    1. How often are hot water boilers completely drained for cleaning and inspecting?
      - EVERY FOUR YEARS.
    2. How often are all firesides (tubes, fire box, tube sheets) cleaned?
      - TWICE each year; at the end of the school year and during Christmas vacation.
    3. What is the normal operation pressure range for hot water boilers?
      - This will vary with height of expansion tank, but will normally be 12-23 PSI. If pressure on hot water boiler is greater than this, call the District Operations office. Hot water boiler not necessary to fire until needed.
    4. What is the temperature control setting for hot water boilers?
      - Generally, the burner cut-in temperature is 160 degrees, and the cut-off temperature is 180-185 degrees. This setting will vary with some boilers.
    5. What is the proper water level for hot water boiler expansion tanks?
      - ONE inch from the bottom of the glass to one-half the level of the glass or just slightly above.
      - During operation, water should never be below sight glass as this admits air into the hot water system, which will retard the flow of water, causing heating problems throughout the area served by hot water heat.
    6. What causes a hot water boiler to start & stop automatically?
      - Two immersion-type aqua stats, one set to start boiler; the other set at a higher temperature to stop boiler.
    7. Do you have to heat up hot water boilers every 3 days?
      - NO, just when you need heat.
  - **Boilers – Steam**
    1. What is the determining temperature for operating boilers?
      - During the heating season and when school is in session, the boiler SHOULD NOT be shut down unless the outside temperature is 55 degrees or above.
    2. When should boiler be left on DAY position during the night?

- When the temperature is 15 degrees or BELOW, or the weather forecast is for 15 degrees or BELOW, boilers should be left in the DAY position – not on the CLOCK.
3. What is the proper boiler water level?
    - ONE inch from bottom of glass to one-half level of glass. Water level will depend on TWO things:
      1. Design of boiler
      2. Piping location of water level control
  4. Where should the water sample be taken from?
    - Either the water gauge blow down valve located at the bottom of the gauge glass or the WATER COLUMN blow down line. Blow each well before taking the sample.
  5. How often should the engineer “bottom blow down” the boilers?
    - EACH boiler ONCE per week (every Monday morning)
    - Remember:
      - a. If blow down can be observed, continue until black sediment stops flowing.
      - b. If blow down cannot be observed, limit blow to 10 seconds.
      - c. NEVER leave blow down valve while OPEN.
      - d. NEVER blow more than ONE boiler at a time.
  6. How often should water column be “blown down”?
    - ONCE per week.
  7. How often should the low-water cutoff be blown down?
    - ONCE each day for each “cutoff” or combination “cutoff and level control.”
    - Do this when burner is RUNNING. If this operates properly, the burner will SHUT DOWN within a few seconds. If the burner does NOT shutdown, call the District Operations office IMMEDIATELY!
  8. How often should the gauge glass be blown down?
    - ONCE per week.
  9. How often should the safety valves be popped?
    - Each safety valve, ONCE per month for each operating boiler. Blow the first day of each month.
  10. What should the engineer do about any leaks?
    - Report ANY leaks in boiler piping, fittings, or flanges to the District Operations office.
    - Report ALL leaks in manhole and handhole gaskets to the District Operations office.
  11. How often should the high water cutoff be blown down?
    - ONCE per week.
    - NOTE: Some high water cutoffs are piped so that they are blown down at the same time low water cutoffs are blown down.
  12. Should emergency water valve be used to maintain proper water level in boiler?
    - NO! Use only in emergency. If this valve has to be used to maintain normal water level, call the District Operations office.

13. What causes a steam boiler to start and stop automatically?
  - A steam pressure switch called the HI-LOW LIMIT SWITCH.
14. What is the best time to give boilers a bottom blow down?
  - When burners are NOT running. Preferably just before boiler is ready to start a firing cycle as this gives sediment time to settle.

**NOTE: Keep Steam Boilers HOT.** Fire boiler every 3 days until bottom handhole is hot. **Do not let boiler get cold.**

- **Cleaning Boilers**

1. All firesides (tubes, fire box, tube sheets) are to be cleaned TWICE each year – at the end of the school term AND during Christmas vacation.
2. Boilers that burn oil at all times should be checked for soot build up EVERY TWO WEEKS and cleaned if needed.

- **Summer Procedure for Cleaning Boilers**

1. Be sure boiler water is HOT (no steam pressure, but water must be hot).
2. Burner in OFF position (open disconnect switch to burner).
3. Leave water in boiler (tubes will clean much easier if surrounded with hot water).
4. If air handler fan is in the same room as boiler - be sure fan is **STOPPED** before punching tubes.
5. Open all access doors and punch tubes.
6. If tubes have a heavy accumulation, use the blade scraper first, follow with several passes of the coil wire scraper, and finish with the circular wire brush.
7. If loose soot remains in the tubes, wrap and tie a rag around the wire brush and use for removal.
8. Finish the tubes first and if the boiler has cooled enough (comfortable to touch), use the “bottom blow” to remove all water. Leave “bottom blow” wide open.
9. Remove the manhole, all handhole plates, and washout plugs from boiler, remove all plugs from crosses and tees for water of stream lines adjoining boiler. This includes the blow down and return line entering the boiler, provided they are fitted with plugs.
10. As soon as possible, wash all watersides with a high pressure water hose.
11. NEVER let the watersides dry until they have been well-washed with a hose. This prevents hard scale formation.
12. With a steel rod, a piece of lightwall conduit, or other suitable tool, remove scale buildup from all pipework that is accessible by removal of plugs.
13. After the first complete wash down, inspect the watersides for unusual pitting or corrosion, remove loose scale with scraper, and look for any unusual heavy scale buildup on the furnace watersides of Scotch Marine boilers.
14. Remove all loose scale from water legs with hose, hands, or other suitable means.

15. Place strips of rags through handhole openings and extend into water leg. This acts as a wick to speed up drying.
16. After completion of the watersides, clean all threaded openings and plugs, dry, and coat with "C-5A," scrape and wire brush all gasket surface.
17. In furnaces, remove all soot from interior with wire brush, check condition of crown sheet (top area of furnace) for blisters, out of roundness, or pits.
18. Check condition of firebrick and note any cracks, missing bricks, or walls that sag.
19. Clean soot and accumulation from front and rear tube sheets with wire brush.
20. Clean all soot from combustion chambers and as possible to reach, remove soot from uptakes.
21. Remove soot from stack cleanouts.
22. **BOILER CLEANUP IN SPRING:** It is VERY IMPORTANT that all soot be removed from metal surfaces of boiler at this time. Any dampness (even high humidity) will change the sulphur of soot to SULPHURIC ACID, which in turn, attacks the metal.
23. Keep access and fire doors open, handhole and manhole plate off, and all pipe plugs out until ready to "head up" boiler next fall.

- **Fuel Oil**

1. How often should the fuel oil suction strainer be cleaned?
  - ONCE PER MONTH. Each month, stop burner, close the suction valve and clean. IMPORTANT!! Re-open the suction valve after strainer is cleaned and capped. Clean the strainer every month even though you are not burning oil because the oil circulates whenever the burner is on.
2. When should the fuel oil tank be checked?
  - When burning fuel oil, the amount on hand should be checked EVERY DAY. Maintain at least 1,000 gallons of oil in the tank.
3. When should fuel oil be burned?
  - Burn fuel oil in each boiler every FRIDAY morning. Burn ONLY as long as is necessary to determine that the system is working properly.
4. How often should the fuel oil filters be changed on the new burners at NOYES SCHOOL?
  - Twice per year.

- **Boiler Treatment Protection**

1. What type of protection should you use?
  - Eye protection--goggles.
  - Hand protection--rubber gloves.
2. What is the name of the treatment used in steam boilers?
  - BWT 13A
3. What is the name of the treatment used in hot water boilers?
  - BWT 13A

4. To bring water to the desired parts per million, how much treatment do you add?
    - Start-up of steam boilers.
    - Add ½ gallon treatment in top of boiler for each of boilers.
  5. Where do you add the treatment?
    - In manhole in top of boiler.
    - In pipe cross connect on top of boiler.
    - Questions, call District Operations-671-4260.
  6. When do you test?
    - When the boiler is hot.
  7. How do you test?
    - Use Nitrite Treatment Test Kit.
    - Results of nitrite test is between 500 and 800ppm.
  8. When do you add treatment by treatment feeder?
    - When boiler is on line.
  9. How much treatment do you add to feeder?
    - Not more than two cups.
  10. When adding boiler treatment through treatment feeder, how long will it take for treatment to completely enter boiler water?
    - 24 hours.
  11. If treatment does not enter boiler, what are possible causes?
    - Valve closed at bottom of treatment feeder.
    - Proper vacuum pump is not on.
  12. When do I test?
    - Test boiler after each time you add treatment when desired ppm are reached.
    - NOTE: Test 24 hours after adding treatment.
    - Test boiler once a week until boiler sample test results are between 500 and 800.
    - Test boiler results are due in the District Operations office the first week of each month. Send to the boiler maintenance supervisor by e-mail or by school mail.
    - The second week, fill water bottle with a sample and send back to District Operations as soon possible. The water service company will be making tests the third week of the month.
    - Test sample results will be sent to you next month with sample bottle.
    - Read test results to see if there are any changes on blow down, procedure, etc.
  13. How long do we send in test result and test bottles?
    - Once a month from October through May.
- **Procedure to “Head Up” Steam Boiler**
    1. Order from shop the size and number of gaskets or other materials needed.

2. If water gauge glass needs cleaning, remove and clean with household ammonia, rinse, and replace.
  3. Make several passes through each fire tube with circular wire brush.
  4. Check that no tools, rags, and etc. were left in boiler interior.
  5. Replace all pipe plugs, caps, handhole, and manhole plates.
    - Use C5-A on pipe nipple threads and thread of plugs.
  6. Close main steam valve, bottom blow down, return line, and equalizer valves.
  7. Open safety valve (to permit escape of air), open “emergency water” valve, and fill boiler until water starts to flow from safety valve. Close safety and continue filling until safety pops under water pressure.
  8. Close “emergency water” valve and leave water pressure on boiler for ONE HOUR, then check for leaks. If necessary, tighten gasket or pipe plug to stop leaks.
  9. Use “bottom blow” to lower water level to normal position.
  10. Close access and fire doors.
  11. Open main steam stop, return, and equalizer valves.
  12. Open the “try cock” that is just above the water level, operate the burner for 15 minutes and shut off for 15 minutes, repeat as needed until a good flow of steam issues from “try cock.” (Air is heavier than steam and this will release the entrained air, liberated by heating raw water.) Close “try cock” and continue raising steam pressure.
  13. If boiler brickwork is new: When raising steam pressure the first time, operate burner for TWO to FIVE minutes and shut off for FIFTEEN minutes. Repeat this procedure until full pressure is raised. This allows brickwork to dry and expand equally.
  14. If boiler brickwork is not new: When boilers are headed up in the fall, they will be heated for 15-minute intervals and shut off for 15-minute intervals so water can be heated slowly. The two steps will be repeated until boilers are brought to a full head of steam, which is approximately five pounds. From that time on, the water in the boilers will be kept WARM until they are to be cleaned in the spring. DO NOT LET COLD WATER STAND IN BOILERS AFTER HEATING UP. FIRE BOILERS IMMEDIATELY! ALL BURNERS WILL BE PUT ON THE CLOCK FROM THAT TIME UNTIL JUNE 1<sup>ST</sup>.
  15. Start return pumps.
  16. Check all gaskets and plugs for steam leaks.
  17. Treat boiler water with compound as soon as possible.
  18. CAUTION: After boiler has been filled it should be heated as soon as possible. NEVER let water stand in a boiler that has not been heated.
- **Procedure for Hydrostatic Testing**
    1. Have all caps, plugs, and handhole plates installed. NOTE: Do not install top manhole.
    2. Close bottom blow down valves.
    3. Close return pump discharge valve nearest boiler.

4. Use emergency water valve to start filling boiler.
  5. Open water gauge blow down valve to relieve air from boiler while filling.
  6. After some water is in boiler, add the required amount of boiler compound through manhole opening (usually one gallon).
  7. Install manhole plate and gasket.
  8. Close main steam header valve.
  9. On multiple boiler installations it will be necessary to close equalizer line "tie in" valve between boiler.
  10. Close water gauge blow down valve when water runs through valve.
  11. When water fills to top of gauge glass, lift safety valve momentarily to relieve trapped air.
  12. Continue filling boiler – observe both boiler pressure gauge and safety valve.
  13. Note exact boiler steam gauge pressure when safety valve lifts.
  14. When safety lifts, close emergency water valve.
  15. Leave pressure on boiler for one-half hour and observe all gaskets, fittings, tube sheets, piping, and internal surfaces of firetubes for leaks. Make written notation of same and repair if necessary. Notify the District Operations office immediately if repairs are needed.
  16. Use bottom blow down to drop water level to normal position.
  17. Keep main steam header valve closed and operate burner intermittently.
  18. When pressure gauge starts to rise, open safety valve slightly to relieve trapped air.
  19. Stop burner and re-tighten all gaskets.
  20. If everything checks out properly, boiler is now ready for operation.
  21. Raise steam pressure slowly by intermittent firing of burner to full head of steam pressure (two to five minutes on and fifteen minutes off).
- **Use of Loose Soot Removal Tool**
    1. ALWAYS clean tubes with cylindrical scrapers and wire brushes first.
    2. Before using loose soot removal tool – BE SURE – all cleanout ports and access doors on uptakes are CLOSED.
    3. On most boilers FIRE DOORS and SECONDARY AIR DAMPERS must also be closed.
    4. ALL fans and blowers in boiler room and adjacent rooms must be OFF.
    5. IMPORTANT: Adjust air control valve on soot removal tool for a minimum air flow. CAUTION: A high air flow will cause soot to fly and redeposit in tubes.
  - **Recommended Maintenance Procedures for Roof Top Units**
    - Each Octagon Air Systems unit is designed and constructed for minimum maintenance and dependable operation. However, certain maintenance procedures are required to ensure maximum operating efficiency. Some suggested procedures with the recommended intervals for a typical unit are listed below.



**CAUTION:** Before attempting to check or service the unit, turn off the electrical power to prevent accidental start-up of the unit.

- **Special Maintenance**

1. After each severe windstorm, check the unit's exterior panels for secureness and damage.
2. After each major electrical storm, check the unit for blown fuses or tripped overloads.
3. On a frequent basis, check the supply air diffusers and grills for the accumulation of dust and/or lint.

- **Monthly Maintenance**

1. Change the filters (more frequently if dusty conditions exist).
2. Check the tension, alignment, and the condition of the blower belts.
3. Typically, correct belt tension exists when the belts can be manually depressed ½" to 1" midway between the pulleys. When replacing belts, always replace them with a matched set of belts of equal quality.
4. After installing new belts, be sure to check the belt tension and alignment.
5. Check for dirty or clogged coils.
6. Check all damper linkages for tightness. Check the barometric relief dampers for free movement (when applicable).
7. Check all motor mounts for tightness, including the compressor mounts.
8. Check the supply air blower wheel(s) for excessive dust collection.
9. Check and clean FPB in all rooms and replace.

- **Quarterly Maintenance**

1. Check the motor and the blower bearings for dryness, and lubricate if necessary.
2. Clean the coil(s) with pressurized air or water if mildly dirty. A suitable coil cleaner may be needed if the coils are very dirty. Caution should be exercised so that the coil fins are not damaged.
3. How often do you check roof top units?
  - Monthly.
4. What do we check on the rooftop units?
  - See recommended maintenance procedures.
5. Do we do the repairs on the roof top units?
  - No, call District Operations – 671-4260.
6. How often do we change the filters?
  - Change filter in Dec., April, and Aug. when needed.

## **Heating and Ventilation**

- **Exhaust Fans**

1. When should exhaust fans be left on?

- Only when the building is occupied. If only a small section of the building is being used for special activities, run only exhaust fans needed in that area.
- 2. Do engineers lubricate exhaust fans?
  - NO - District Operations will service each summer.
- 3. Who checks and cleans the kitchen exhaust system filters?
  - The engineer – as often as needed.
- 4. How should they be cleaned?
  - Remove and flush with clean, hot water.
- **Master Fans and Air Handlers**
  1. When should air filters in air handling system be replaced?
    - Replace when dirty. If double stack of filters are used, remove and destroy filter in #1 position. Move #2 filter into #1 position. Place a new filter into #2 position.
  2. What type of oil is used in master fans at Humboldt?
    - Lubriplate #3.
  3. When school is in session and boilers are cut off due to high outside temperatures, should the air handling fan be left on?
    - The fan should be left ON in the HAND position to provide ventilation. Stop fans when engineer completes his work shift.
  4. How often should the oil level in air handling fans be checked?
    - ONCE each week.
  5. How often should the air handler be greased?
    - Once in SEPTEMBER and once in JANUARY. Use Lubriplate 930-2 grease.
  6. Do engineers grease the air handler fans?
    - YES!
  7. Do engineers change the oil in air handler fans?
    - NO!
  8. When should the air handler fans be set in the AUTOMATIC position?
    - During the heating season when the boilers are placed on either the DAY or NIGHT position.
  9. What about before and after the heating season?
    - The air handlers should be OFF unless the building is occupied.
  10. What type of oil is used in air handling fans at all schools?
    - Lubriplate #3.
  11. What is one of the first things to check if your master fan or air handler shuts off or fails to start?
    - FREEZE-STAT. Some freeze stats are equipped with red warning lights. Red light will be on when freeze stat has tripped out. Freeze stat must be reset by HAND after it trips out.
  12. Must belt guards be kept on air handlers and master fans?
    - YES! At ALL times. If necessary to replace belts, put guard back on IMMEDIATELY!

13. How often should air handling fans be lubricated when oil is used for lubrication?
  - ONCE PER MONTH.
  
14. When should restroom exhaust fans be started and stopped in ALL schools?
  - Run all fans 9:00 a.m. to 7:00 p.m. daily during the school term.
  - Some schools are equipped with pneumatic controlled relief dampers. Other schools are equipped with power exhaust fans which serve the same purpose. During the school term, these should run from 9:00 a.m. to
  - 7:00 p.m., Monday through Friday.
  - **NOTE:** This does not include Master fans, univents, or air handler fans. If there is extra activity in the building after normal school hours, these relief dampers and fans should be used during that period also.
  
- **Univents**
  1. When are univents to be on?
    - Any time the room or area is occupied.
  2. When are filters to be cleaned and/or changed?
    - Clean filters in August, December, and April.
  3. Who cleans or changes the univent filters?
    - The engineer.
  4. Do engineers lubricate the motors and shaft bearings?
    - YES, each summer.
  5. What type of lubricant is used?
    - If OIL fitting, use Lubriplate #3.
    - If GREASE fitting, use Lubriplate 930-2.
  
- **Pumps**
  1. **Small Circulating**
    - Hot water circulating pumps should be oiled every SIX MONTHS using Lubriplate #3. Add 12 drops to motor bearing and about ONE OUNCE (8 teaspoons) to the pump bearing.
  2. **Vacuum and Condensate**
    - The temperature of saturated steam at 5 PSI is 227 degrees F. If all traps are working properly, the temperature of the return water entering the vacuum pump should not exceed 160 degrees.
    - The type of grease to use in vacuum or condensate pump motors is Lubriplate 930-2.
    - Some of the new type vacuum pumps have lifetime lubrication. If there are no grease fittings on your pump, it needs no lubrication. If in question, call the District Operations office at 671-4260.
    - Operate pump in FLOAT position. NEVER operate in CONTINUOUS position. This is for testing purposes only.

Do engineers drain vacuum or condensate pumps at the end of the school year?

A. NO! This is no longer necessary.

**SJSD Warehouse**  
**2735 Pear Street**  
**671-4055**

*The Pear Street Warehouse was purchased to fulfill the needs for a centralized system of purchasing, receiving, inventory control and distribution of goods used in the day to day operations of the St. Joseph Public Schools.*

**Warehouse Personnel**

Mickey Gill: Supervisor

Sherry Sharp: Secretary

Christina Holmes: Crayons To Computers & Records

**Programs located at Pear Street Warehouse**

- ❖ Warehouse 671-4055
- ❖ Student Records 671-4070
- ❖ Crayons to Computers 671-4264

**Warehouse responsibilities include purchasing, receiving, inventory control, and distribution of the following 16 SJSD resources:**

1. Books/curriculum materials
2. Bulk Boiler Supplies
3. Custodial/Housekeeping supplies
4. Office supplies
5. Nutrition Services kitchen chemicals
6. Technology supplies
7. Furniture – new & used
8. Print Shop materials/paper

- 9. Student Records
- 10. Nursing supplies
- 11. Athletic supplies
- 12. Crayons to Computers supplies
- 13. Special Services supplies
- 14. Homeless supplies storage
- 15. Risers, tables, chairs, and choral platforms
- 16. Emergency preparedness district supplies

### **Software**

#### ❖ *School Dude*

**Inventory Direct** – used for monitoring & tracking all consumable items stocked at Pear Street Warehouse.

Building Principals or designated representative order necessary items through Inventory Direct via Internet. Requests must be placed for necessary items by **Wednesday** to allow us sufficient time to approve, fill, & distribute supplies on **Monday**. The Inventory program is currently monitored and used by Warehouse personnel.

**Maintenance Direct** – used for delivery/pickup requests for furniture, paper, or curriculum needs

Designated representative request needs/wants through Maintenance Direct via Internet. Requests are processed and completed by Warehouse personnel.

#### ❖ *Textbook Tracker*

**Books and curriculum** are received, kept in inventory through the curriculum software, and distributed through Maintenance requests. This process is monitored by warehouse personnel.

## **Delivery Process & Procedures**

### **4 Delivery Types**

#### ❖ **Paper Towels & Toilet Paper**

Requests submitted through email (randy.lynch@sjsd.k12.mo.us) by the building engineer are delivered by the current supplier. Deliveries will occur 1-2 days after order has been placed.

❖ **Bulk Deliveries**

Requests submitted through SchoolDude, **Maintenance Direct**, by the designee are delivered via “Commodity Trucks” to each SJSJ building weekly (bulk deliveries, such as furniture & other large items)

Requests for tables/chairs must include the date of delivery & preferred date of pick up.

❖ **Weekly Consumable Supplies**

Requests submitted through SchoolDude, **Inventory Direct**, by either the secretary or designee are delivered to each SJSJ building via “Commodity Trucks” every ***Monday***. Items that work through this system are as follow:

Nursing supplies, Custodial supplies, Office supplies, and other small item requests. Boxes must weigh no more than 25 pounds.

\*Requests must be placed for necessary items by ***Wednesday*** to allow sufficient time to approve, fill, & distribute supplies on ***Monday***.

❖ **Cafeteria Deposits, Print Shop Materials, Inner-School Mail, & Small Packages** are delivered daily without prior request. This is done by the delivery van. Our mail route stops daily at each school to exchange mail bags & pickup cafeteria deposits.

\*Please be sure to place all mail IN the mail bag & have cafeteria deposits prepared for your designated pickup time. If the mail will not fit into the mail bag, please label it appropriately and place it with the mail bag. If the shipment cannot be placed in the mail bag location, or it is more than 1 box, a delivery/pick up request via Maintenance Direct is required.

\* Delivery/Pickup schedules do NOT run on Snow Days

\*Summer/Early Out schedules will be abbreviated due to schools closing and available delivery staff.