

SUBJECT: Housekeeping and sanitation inspection strategy and evaluation matrix.

DATE: March 12, 2011

SAMPLING STRATEGY

A stratified/random sampling strategy prescribed by MIL-STD-105E (ANSI/ASQ Z1.4)) was chosen to eliminate bias in the selection of housing units, and where applicable, the individual cells within those housing units. If there are questions concerning the cleanliness of dayroom furnishings and/or dormitory beds, the same sampling scheme will be applied. By using a procedure that focuses on inspection by attributes, the observable deficiencies or deviations from established policies and procedures can be ranked and sorted for quality improvement and ultimately changes in quality assurance. The sampling strategy provides statistical validity to the inspection observations as well as focusing attention to areas needing administrative, facility and/or materiel improvements. It also assists in formulating the professional opinions of the investigators by measuring cleanliness against a well-defined sampling standard. The consistent use of the sampling strategy will clearly demonstrate trend analyses that can be used as support documentation for capital and further operational improvements.

The sample size is determined from the daily census report forms for each facility that lists the occupied housing units and inmate classification. Since both dormitories and cell blocks are represented in the sample set, they are batched separately because of their differing configurations, management and inmate movement patterns. The sample sizes for each sub-set are determined using Table II-C: *Single sampling plans for reduced inspection (Master table)*. The reduced sampling plan was selected because of time constraints in conducting inspections; considering the sheer number of individual housing units in each facility as well as the uniformity of each facility's operation that may affect the outcome of the inspection. The consultants felt that additional sampling would be both superfluous and unnecessary under current conditions. If significant negative changes are noted during the routine inspections, Normal and Tightened inspection tables can be used as appropriate.

The individual housing units and individual cells within cell blocks (as well as selection of dayroom furnishings and dormitory beds, as indicated) that make up the sample size are identified by using a table of random numbers. For purposes of identification, each unit listed on the daily census report that meets the legal conditions (e.g. detainee housing) of the inspection is assigned a number. The units to be inspected are selected based on the corresponding number from the table of random numbers.

INSPECTION TEMPLATE

The inspection template is designed for use in both dormitory and individual cell occupancies.

The inspection template identifies eleven basic field observation criteria. Five criteria refer to essential administrative and managerial components of housekeeping and are applicable to all areas inspected. The first four criteria include adherence to policies and procedures; the presence or absence of cleaning chemicals and supplies and the sanitary condition of housekeeping equipment, and, the provision of adequate water facilities to support wet sanitation and disinfection efforts.

Following these four criteria is the fifth criterion “the presence of vermin and indicator organisms”. This observation was included because housekeeping is a major component of integrated pest management. As such, it is integral to an effective housekeeping program. Because the actual pest eradication is coordinated by a professional pest control technician, who is not under the direct supervision of inmate management administration, it is not controlled as other components of the housekeeping program. Even though this observation is essential in the health and well being of the inmates and staff, it does not factor into the compliance score, but is included as an informational component that requires immediate action when noted.

The remaining six inspection criteria are observations of housekeeping outcomes and are direct indices of housekeeping efforts.

Each of the directly observable housekeeping outcome criteria has published public health, epidemiological and/or microbiological data supporting their possible role in disease propagation and/or injury causality within an institutional setting. In addition, these criteria are also deemed essential for basic and routine housekeeping activities in accordance with established correctional industry standards and practices.

Whereas a dormitory inspection is conducted in its entirety, cell block inspections are conducted in two parts consisting of the common areas and individual cells. A randomly selected subset of the cells is inspected individually in accordance with the applicable sampling scheme. In addition, if a question arises about the sanitary status of any multiple components within a housing unit such as dayroom furnishings (chairs and tables), beds and/or windows, these components may be sampled in accordance with the appropriate MIL-STD-105E sampling scheme; where individual samples are randomly selected to make up the sample set.

INSPECTION TOOLS

The following are recommended basic inspection tools necessary to evaluate housekeeping performance criteria:

1. LED WHITE LIGHT FLASHLIGHT; preferably with a focused beam and a minimum light output greater than 60 lumens (for detection of insect parts, rodent feces, dust, scale and soil buildup).
2. ULTRA VIOLET FLASHLIGHT with a UV light output in the 365 – 400 nm range (for detection of urine and other body fluids, soap scum and mold).
3. COSIGN COMPENSATED LIGHT METER with an effective illumination detection level greater than 10 foot-candles to measure light levels in all areas.
4. 70% ISOPROPYL ALCOHOL SATURATED PADS, aka Alcohol Prep, Alcohol Swab (for detection of soiling on touch point surfaces including furnishings).
5. QAC (QUATERNARY AMMONIUM CHLORIDE) TEST PAPERS OR TEST STRIPS (detection level up to 400 ppm).

Optional inspection tools:

1. TRACER POWDER OR SMOKE TUBES for detection of exhaust ventilation.
2. INSPECTION MIRROR with extension handle.
3. HAND MAGNIFIER
4. NITRILE EXAM GLOVES.

INTERPRETATION

Each criterion on the inspection form, with the exception of “presence of vermin or indicator organism” and “presence of odors”, has two or more qualifiers that define that observation. Observation of any single qualifier (or multiple qualifiers were specifically noted) for any categorical component, constitutes a “Does not meet acceptable standards or requirements” for that criterion. The definitions of these criteria are listed in the section titled “Evaluative Housekeeping Criteria” that begins on page 9 of this document.

Because the inspection process does not involve the use of ATP detection systems, microbiological monitoring or any quantifiable field tests that would indicate the degree of cleanliness at an observation point, each individual component is evaluated using Boolean Logic (+/-; yes/no) by producing a single output for any given criteria. It is understood that only one observation for each deficiency needs to be recorded and that multiple observations of the same deficiency; within the same unit component does not necessarily influence the severity or the outcome of “Does not meet” or “Meets” standards or requirements. This is consistent with other public and environmental health inspection protocols (such as those used for food, occupational safety and infection control). The exception is when a situation is deemed to present an immediate, clear and present danger to the health, safety and well being of the inmate(s) and staff.

Based on other environmental health and safety inspection criteria and templates, it is usually accepted that three critical findings in evaluating the housekeeping criteria or any housing unit component constitutes “Does not meet standards or requirements” or unsatisfactory housekeeping conditions...

In determining the outcome from the aggregate of inspection data, a percentage of the total findings will be used. A total score of 80% or greater is generally considered a satisfactory outcome. If the data are presented as the Acceptable Quality Limit (AQL) which is also given as a percentage of total unsatisfactory findings, the same pass/fail criteria will be applied.

Housekeeping compliance is determined in the following manner:

- Management/Sanitation: Because these criteria are administrative and managerial, and because they are deemed as absolutely essential to any housekeeping and sanitation operation, if any single item fails to meet the compliance standards, the total unit compliance is deemed unsatisfactory until that deficiency is corrected. The compliance score for each criterion is presented as “0” for compliance and “1” for non compliance. A compliance score of any number greater than “0” for any criterion, or combination, is considered non-compliant.
 - The presence of vermin or indicator organisms is listed under the management section because it requires subsequent action by the correctional staff in reporting the condition. If an observation of vermin is made during the formal inspection, that observation is informational only and does not factor into the overall unit compliance unless it remains unreported or uncorrected.
- Housekeeping: The housekeeping compliance of the observational criteria is given as a percentage of acceptances. The individual criterion are not weighted or assigned a risk factor. Rather, they are ranked equally, with the number of non-compliance for each unit component factored in the final percentage. In this way, improvements can be initiated for any given criteria exceeding expected

deficiency notations without redoing the entire housekeeping program. For purposes of providing an objective evaluation of housekeeping and sanitary conditions, the uniform definitions listed under “Definitions” and the qualifying criteria itemized in the following sections are used as the determinant variables.

- Component Trend Score: The Component Trend Score is listed on the right side of the inspection form, immediately preceding the column for inspection notes. This score indicates the areas of the unit inspected that fall below acceptable standards or indicate good compliance. Under the Reduced Sampling schedule, scoring must be 3 or less for the housing component to meet sanitary standards or requirements. In those rows designated as “General”, “Day Room Furnishings” and “Dormitory Beds”, the score must be 2 or less. For purposes of the inspection, the Component Trend Score is only an informational notation that is used strictly for quality improvement and does not factor into the final unit compliance evaluation. It simply designates specific unit components needing improvement in housekeeping.

A second method for determining level of compliance with the observable criteria can be accomplished using Table II-C of the MIL-STD document. This method may be adopted once substantive compliance is established in order to further define quality improvement components. In using this method, the acceptance and rejection numbers correspond with the sample size and determinants of acceptability. The determination of the Acceptance Quality Limits of the inspection, which is also factored as a percentage, uses the following as evaluative criteria:

- If the number of “Does not meet acceptable standards or requirements” findings found in the sample is equal to or less than the acceptance number listed in Table II-C, or less than three critical findings, the sanitation of the unit and the housekeeping program is considered acceptable.
- However, if the number of “Does not meet acceptable standards or requirements” findings is equal to or greater than the rejection number

listed in Table II-C or is greater than three critical findings, the level of sanitation and evaluation of the housekeeping program is considered non-acceptable or unsatisfactory.

The definitions and criteria as detailed and listed in the following pages will be applied when conducting an inspection using the inspection matrix form. A list of essential inspection tools is also provided above to assist with and quantify observations as necessary.

DEFINITIONS

ACCEPTABLE QUALITY LIMIT (AQL): The AQL is the quality level that is the worst tolerable process average when a continuing series of sites are selected for acceptable sampling. While it does not directly relate to the health and well being of inmates and staff, it more directly relates to an expected level of performance.

ADEQUATE: as much or as good as necessary for some requirement or purpose; fully sufficient, suitable, or fit.

CHRONIC: continuing a long time or recurring frequently.

CLEAN: visibly free from foreign matter such as dirt, accumulated organic or inorganic matter, or impurities; unsoiled.

CLEANABLE: capable of being cleaned.

COMMON AREAS: Common Areas include corridors, stairwells, search rooms, sally ports, interview and special purpose rooms.

COMMON (HIGH) TOUCH SURFACES OR TOUCH POINTS: Inanimate objects in the immediate vicinity of the inmates and staff that are touched most often. These surfaces have been shown to play an important role in the possible transmission of pathogens and therefore, require more frequent cleaning and disinfection or sanitization.

DEDICATED EQUIPMENT: Distinctively marked and identified cleaning equipment such as mops, buckets, brooms, etc. that services one primary area, function or task. For purposes of the inspection, dedicated cleaning equipment is for use in food service and medical clinic areas when a common janitor's closet is used.

DIRTY: soiled; unclean.

FILTH: foul or disgusting dirt; refuse; the state of being covered with unclean things; the state of being unsanitary.

INDICATOR VERMIN: Vermin whose presence in the environment indicates conditions of filth, chronic wetness or the presence of contaminating substance(s); primarily organic matter. Examples include fruit flies, sewer flies, pill bugs, silverfish and house flies, among others (Arthropods). An infestation is when vermin are observed in numbers or quantities large enough to be harmful, threatening, or obnoxious. Determination of an infestation is also through the observation of multiple signs such as the presence of feces, rub marks and/or gnawing damage; detection of multiple instars (stages of development) of arthropods is considered an infestation.

MALODOR: a distinctive odor that is offensively unpleasant; a stench; generally putrefactive (rotting or decaying organic matter); body odors or odors resulting from mold growth or the presence of vermin. For purposes of the inspection, malodors are listed as: septic, putrefactive and body odors.

PAR LEVELS: are boundary markers in inventory levels that signal replenishment is necessary; an amount or level considered to be average; a standard.

OCCLUDED: become closed; obstructed; prevent the passage of air or liquid waste.

PUTREFACTION: decomposition of organic matter, especially protein, by microorganisms, resulting in production of foul-smelling matter.

SEPTIC: of or relating to or caused by putrefaction.

SANITARY: free from filth and pathogens; hygienic; conducive to or promoting health; free from dirt, germs, etc.

SOILED: covered with dirt or other impurities: to make unclean especially superficially.

UNIFORM: always the same; showing a single form or character in all occurrences; conforming to one principle, standard, or rule; consistent.

EVALUATIVE HOUSEKEEPING CRITERIA

Special consideration and the interpretation of findings of specific items designated by an asterisk (*) are detailed below; following the general criteria.

ADMINISTRATIVE AND MANAGERIAL OBSERVATIONS – The following five (5) criteria apply to all areas of a housing unit.

1. CLEANING AND SANITIZING PROCEDURES FOLLOWED*:
 - a) Uniform sanitary procedures as detailed in policies and procedures not followed.
 - b) Cleaning frequency inadequate to maintain proper sanitation.
 - c) Policy is inadequate to address soiling of the unit.
 - d) No evidence of training of inmates to housekeeping policy.
 - e) Disposable gloves and other personal protective equipment not available, provided or used as per manufacturer's label requirements and/or institutional policy.

Verification of these criteria is by indicating two or more of the following:

- a. Lack of adherence to established policies and procedures;
- b. No notation in unit log (schedule or frequency);
- c. Absence of training materials or instructional postings in critical housekeeping areas;
- d. Direct chemical test of finished disinfectant solution;
- e. Negative responses to inmate and/or staff interviews.

2. LACK OF CLEANING CHEMICALS

- a) Cleaning chemicals not provided at the unit.
- b) Par levels not appropriate to the unit. Verification of the deficiency is by any one of the following:
 - a. boundary markers in inventory levels that signal replenishment is necessary not established, or,
 - b. Amount or level considered to be adequate, not maintained, or,
 - c. Absence of a standard quantity as established by policy.

3. INADEQUATE CLEANING EQUIPMENT AND EQUIPMENT SANITATION

- a) Cleaning equipment in poor repair or worn;
- b) Cleaning equipment is visibly dirty and possibly malodorous;
- c) Inadequate storage of housekeeping equipment;
- d) Cleaning equipment storage appurtenances not available for the sanitary and safe storage of mops, brooms and brushes;
- e) Par levels inappropriate to the facility or not established to meet cleaning needs.

4. ADEQUATE WATER FACILITIES PROVIDED

- a) Utility sink not readily available and/or accessible.
- b) Hot and cold water of adequate flow and pressure not provided.
- c) Absence of a free-flowing drain.

5. PRESENCE OF VERMIN INCLUDING INDICATOR ARTHROPODS*

HOUSEKEEPING OUTCOME OBSERVATIONS – the following six (6) criteria are direct observations of physical housekeeping conditions.

1. UNCLEAN TO SIGHT:

- a. Presence of loose filth and garbage
- b. Dust and dirt accumulation
- c. Soiling of touch points and/or high (common) touch surfaces
- d. Soiled bed frames and dayroom furnishings*.
- e. Soiled utility (janitor's) closet
- f. Soil imbedded at transition areas such as edges of spalled tile, floor to wall junctions, door jambs and furnishing floor anchors.

2. ORGANIC SOIL ACCUMULATIONS IN WET AND MOIST AREAS

- a. Organic debris accumulation in and around toilets, urinals, utility sinks, lavatories and showers.
- b. Drain screens* not cleaned of hair and debris; partially occluded drains resulting in temporary pooling of water.
- c. Chronic pooling of water and/or presence of chronically wet walking surfaces.

3. SURFACES SMOOTH AND EASILY CLEANABLE

- a. Structural surfaces in poor repair; porous, uneven/irregular/jagged. For example: Wall-Floor junctions not smooth, rounded or sealed; cracks, joints and tile grouting not sealed or in good repair.
- b. Beds and/or dayroom furnishings in poor repair.

4. LIGHTING

- a. Less than 10 foot-candles; measured at three-feet from the target horizontal surface, or,

- b. Less than optimal lighting from an existing and operational luminary. This includes observable conditions such as dimming or flickering and/or the presence of blackened ends of fluorescent light bulbs.

5. PRESENCE OF MALODORS

Malodors are those that are classified as those that are distinctly septic, putrefactive or body odors.

6. VENTILATION*

- a. Exhaust ventilation in toilets, showers and utility closets not working.
- b. Exhaust ventilation grills occluded with dust, dirt or sealed with paint.

SPECIAL CONSIDERATIONS AND INTERPRETATION OF SPECIFIC ITEMS

POLICY AND PROCEDURES – In order to evaluate adherence to policies and procedures, the main points of the official policies and procedures are outlined on the obverse side of the inspection form. If specific questions arise in their interpretation, the full policy is made available.

PRESENCE OF VERMIN INCLUDING INDICATOR ARTHROPODS – This criterion is listed under the management section because the presence of vermin or indicator organisms requires subsequent action by the correctional staff in reporting the observable condition. However, no further action on their part is necessary unless so directed. If an observation is made, that observation is informational only and does not factor into the overall unit compliance unless it remains unreported or uncorrected.

FLOOR DRAINS – If the floor drain is occluded or partially occluded with organic deposits below the drain screen, it cannot be cleaned using regular housekeeping methods. Therefore it is not considered a non-compliance issue and a notation of the observation should be made in the comments section on the inspection report.

BEDS – Bed sanitation is evaluated by observing the bed touch points including the bed support (the area that holds the mattress), frame and corner posts. Anchor points to the floor are considered part of the floor sanitation. Aesthetic cleanliness is also considered but does not include the underside of the bed.

FURNISHINGS – Sanitation of dayroom furnishings is determined by evaluating the touch points and areas that may come in contact with the body. Aesthetic cleanliness is also considered but does not include parts of furnishings not readily visible such as the underside of the seat or table.

VENTILATION – If no ventilation system is present, it cannot be rated as part of the inspection. However, if there is no ventilation system and the area being inspected is malodorous and/or has chronic high humidity, a notation should be made in the comments section on the inspection form.

ADJUDICATION AND FOLLOW UP ACTIVITIES

If any finding or observation does not meet the defined criteria or definitions, a notation will be made on the inspection form. Likewise, it is expected that any peripheral observations that are not necessarily related to the housekeeping criteria, but are none the less important to the program as well as the health, safety and well being of the inmates and correctional staffs, these observations will also be noted as a courtesy for internal follow up action.

The adjudication of any findings or outcomes that are inconsistent or contentious will be immediately resolved by consensus of all parties participating in the inspection. A notation will be made on the inspection form for review in the event the inspection form requires changes or amendments.