

**SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL DISTRICT
COMPLIANCE DEPARTMENT**

COM 2090

APPROVED: _____ **SIGNED** _____ **DATE:** March 8, 2007
Jon Adams
Director of Compliance

TITLE: **RULE 4104 – REDUCTION OF ANIMAL MATTER**

SUBJECT: **COMPLIANCE INSPECTION PROCEDURES FOR ANIMAL
REDUCTION FACILITIES SUBJECT TO THE PROVISIONS OF
DISTRICT RULE 4104**

OBJECTIVE:

To establish District policy and procedures for equitable and efficient implementation of Rule 4104 (Reduction of Animal Matter).

PURPOSE:

Animal Reduction Facilities (i.e. rendering plants) are subject to many District rules, as they typically house many types of process and emission control equipment, including odor control devices. These facilities have historically been the subjects of odor complaints and enforcement actions related to Rule 4102 (Nuisance). They may be subject to unique permit conditions established on a case-by-case basis to ensure that nuisance-related air contaminants are limited. The purpose of this policy is to describe the procedures to be followed by District compliance division staff when they are inspecting these operations to ensure consistency and to provide a level playing field for the industry.

POLICY STATEMENT:

District staff will enforce Rule 4104 and permit conditions pertaining to the discharge of air contaminants from operations that incinerate, cook, hydrolyze or otherwise reduce animal matter using heated processes. Animal matter transfer facilities, where no rendering actually takes place, do not currently require Permits to Operate (PTO), although this may be taken under advisement in the future. Rendering plants are the largest and most complex of the facilities that are subject to Rule 4104, and so, require permit conditions that are site-specific and considerably more restrictive than the general requirements set forth in the rule. Such conditions are typically developed using New Source Review (Rule 2201) guidelines and with much consideration for compliance with Rule 4102 (Nuisance). Failure to comply with the requirements of Rule 4104 or conditions specified in Authorities to Construct (ATC) or PTOs is a violation and may subject the source to enforcement action.

I. GENERAL GUIDELINES

- a. Inspection Assignments

Inspectors assigned to the area in which a facility is located will conduct inspections.

b. Complaint Assignments

Area inspectors will conduct complaint investigations and inspections associated with permitted and non-permitted (e.g., poultry incinerators) animal reduction operations. Common complaints are related to odor or smoke emanating from a source operation. Inspectors should refer to COM 1140 (Complaint Responses) for general complaint response procedures and COM 2075 (Visible Emissions) for visible emission compliance verification procedures. For non-permitted animal reduction operations, refer to COM 2100 (Incinerator Burning).

c. Pre-Inspection Procedures

Preparation for a routine compliance inspection includes, but is not limited to, the following:

1. Review facility information found in the “Documents” section in the Permit Administration System (PAS), paying particular attention to the previous inspection report(s).
2. Review facility source test information in PAS. Information such as due date(s), results for recent source tests, and source test notifications received should be noted.
3. Review the facility’s recent Compliance History in PAS. Actions such as inspections, complaints received, deviations, breakdowns, and variances will be listed under this section. Determine if any such actions are unresolved and, if so, what needs to be done to resolve them.
4. Print and review active PTOs and finalized ATCs.
5. Where applicable, prepare the portable emissions analyzer according to COM 1150 (Portable Analyzer Policy).

II. PERMIT REQUIREMENTS

a. General

1. Animal Reduction operations require PTOs for process and emissions control equipment. Raw material and finished product handling operations are permitted as portions of the process and/or facility-wide operation.
2. In addition to permitted boilers, boilers with a maximum heat input rating from 2.0 to, and including, 5.0 MMBTU/HR may be found at some facilities. Such boilers may not require a PTO, but an equipment registration with the District. Refer to Rule 4307 for small boiler administrative and operating requirements.

III. INSPECTION PROCEDURES

Refer to COM 1125 (Inspection Practices) and COM 3050 (Inspection Safety) for general inspection and safety procedures. Animal reduction facilities do not generally require the use of specialized inspection or safety equipment. Inspectors who regularly inspect these operations may find it helpful to wear steel-toed rubber boots.

Poultry Incinerators

Rule 4104 governs the use of incinerators associated with poultry ranching operations. Refer to COM 2100 (Incinerator Burning) for more in-depth information.

Rendering Operations

Meat and bone, feather, and blood rendering facilities process whole animal carcasses, animal matter (e.g., meat cuttings, entrails, etc.) and/or blood into protein meals, tallow, and other materials that are used by various other industries. Rendering products are particularly used to supplement animal feeds. While the general requirements of Rule 4104 apply to the processing of raw materials (i.e., cooking), the majority of permit conditions found on permits reference Rules 2201 (New and Modified Stationary Source Review Rule) and 4102 (Nuisance). Inspectors should pay particular attention to these conditions and should be certain that they understand them prior to inspecting the facility. Conditions referencing Rule 4102, in particular, are often site-specific and may require inspection of very specific operating and/or record keeping items.

a. Rendering Process Equipment

Process equipment includes boilers, cookers, hydrolyzers, dryers and other machinery. Refer to COM 2110 (Boilers) for boiler inspection procedures and complete an approved Boiler Inspection Form. Particular attention should be paid to permit conditions governing the use of primary and alternate fuels such as yellow grease and fuel oil #2 (diesel). Specific requirements such as maximum operating temperatures for dryers may be found on process permits. Where applicable, temperature gauges and/or other indicators will need to be located.

b. Raw Material Transport, Receiving, Handling and Storage

Rendering operations receive and/or pick up livestock and poultry carcasses from ranchers, dairy farmers, or poultry producers, as well as bulk loads of things such as feathers. Scrap material from meat cutting and processing operations as well as used grease from food preparation facilities are also received.

The off-site transport of raw materials is not directly regulated by District rules or permits, but is not exempt from public nuisance requirements should a significant problem be discovered with such an operation. Complaints regarding odors or spillage from facility trucks should be investigated according to general complaint response procedures. An inspector may find it helpful to alert their local city or county environmental health department, as they will likely have requirements regarding prevention and clean-up of raw material spillage onto public roadways.

Rendering operations typically have permit limits on the amounts of different raw materials that may be received and/or processed. Determining compliance with these requirements typically involves reviewing material receipt records (see Records Review, below).

Requirements for onsite transport, handling and storage (holding) of raw materials are typically included on a facility-wide permit and reference Rule 4102. Typical conditions for onsite transport and handling include spill prevention and clean-up requirements, as well as maximum time periods during which material may be held in trailers. Typical storage requirements refer to the total length of time that material may be held prior to processing and descriptions of how storage areas should be designed (e.g., covered, enclosed, under negative pressure, etc.) as well as where they may be located. Inspectors should determine compliance with these conditions by observing raw material operations and the questioning of facility personnel regarding typical procedures.

c. Finished Product Conveying, Storage and Loadout

Finished meal and liquid products are conveyed from process operations using conveyors, bucket elevators, pipes, or other means. Requirements for in-process transport, storage, and loadout of finished products at rendering plants are often found on permits that are specific to these operations, but may also be found on process equipment permits. Typical inspections of these operations will include ensuring that conveyors, pipes, ductwork and other material pathways are leak-free and maintained sufficient to prevent fugitive product and odor emissions. Baghouse and filter unit inspections will often be required, as these units often serve meal storage/loadout bins and tanks. Inspectors should follow standard procedures when inspecting particulate control devices, using the approved Baghouse/Filter Inspection Form as a guide.

Inspectors should try to time inspections during hours where truck or rail loadout operations will be running. Loadout operations can be fully evaluated only when operating. If a loadout operation is on stand-by during an inspection, control devices, loadout spouts, and other equipment may be checked for proper maintenance.

d. Odor Control Equipment

Odor control devices such as scrubbers, condensers, cyclones and thermal oxidizers are essential for limiting the emission of compounds that may cause a nuisance to the surrounding area. In some cases, all or a portion of process emissions may be routed to and incinerated in a boiler, and the boiler then functions as an emissions control device. Proper inspection of odor control equipment will include a physical inspection and records review (See Records Review).

Inspectors should pay close attention to the operating requirements of odor control equipment. Odor control device conditions are often found on process equipment permits and typically include specifications for operating parameters such as the following: concentration of chemical agents in scrubber liquor; scrubber liquor pH; minimum fresh water flow rates into a scrubber; pressure differentials across a scrubber; temperatures of process air entering scrubbers, condensers or other devices; and minimum operating temperatures and process air retention time for

thermal oxidizers. This type of parametric information is used as an indicator of control device operating efficiency and should be checked carefully at the time of inspection and in records. Some parameters such as retention time within thermal oxidizers cannot be easily determined during a routine inspection and may have to be determined during start-up or periodic source testing.

e. Sanitation

Rendering operations can be subject to many sanitation requirements, most of which would be in place to help ensure compliance with Rule 4102 (Nuisance). Permit conditions governing the cleaning and maintenance of process and odor control equipment and process air ducting will often be found on process equipment permits. Conditions often specify cleaning frequencies and even the type of cleaning methods and agents that shall be used. The sanitation of raw material holding areas, pits and transport equipment, as well as clean-up of raw material spills, if present, will typically be addressed by conditions on a facility-wide permit and will also often specify minimum cleaning intervals and methods. Record keeping requirements are typically associated with sanitation conditions (see below).

f. Records Review

Animal reduction facilities are composed of several different operation types (i.e., raw material, processing and loadout, cleaning and maintenance, etc.), and so, are required to keep several types of records. The most common records needing inspection at a rendering plant are raw material receiving, finished product storage and export, control equipment operation, equipment and ducting temperatures, and cleaning and maintenance records. Records are often maintained as daily logs maintained by facility staff that may or may not be transferred to an electronic report that would be more easily reviewed. Incoming and outgoing material records are typically well organized and easy to review, as good material throughput records are essential for the efficient operation of a production facility. Emission control equipment operating records include hourly and/or daily logs, as well as information from continuous recording devices. Because they provide more than a snapshot of actual operations, these continuous recording devices are often the best indicator of how equipment typically function. Inspectors should determine how facility personnel ensure that a device is properly calibrated. Where necessary, an inspector will be able to use continuously recorded data to verify parametric data recorded by plant employees on logs.

Other Considerations

When visiting a rendering operation, inspectors should be particularly aware of the surfaces that they contact, because the unprocessed animal matter found in and around a plant is unsanitary and may contaminate shoes and clothing with odorous compounds that are difficult to remove.

Prior to inspecting a facility that is a frequent subject of odor complaints, an inspector may find it helpful to conduct an odor check downwind from the source. An inspector will be able to collect information on the particular process(es) that are running at the time and may be able to get an idea of how efficiently odor control equipment is functioning. Certain types of odors or odor intensities may help an inspector determine if a particular permitted operation should be inspected particularly closely.

Inspectors who conduct regular inspections at animal reduction facilities due to odor complaints or other compliance issues may find it helpful to develop a checklist or inspection summary sheet that is particular to the facility they are visiting. A summary of enforceable permit conditions will help ensure that a problem facility is inspected as consistently as possible and will help when other inspectors need to visit the facility.