



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **082012-010** Project Number: 2012-05-106

Parent Company: Arnold Police Department

Parent Company Address: 2101 Jeffco Boulevard, Arnold, MO 63010

Installation Name: Arnold Police Department

Installation Number: 099-0170

Installation Address: 2101 Jeffco Boulevard, Arnold, MO 63010

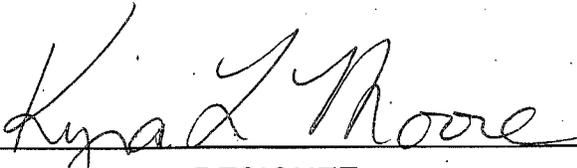
Location Information: Jefferson County, LG 2991

Application for Authority to Construct was made for:
Installation of one Drug Terminator. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

AUG 20 2012

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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Project No.	2012-05-106

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Arnold Police Department
Jefferson County, LG 2991

1. Process Requirements for the Drug Terminator (EU-01)
 - A. Arnold Police Department will burn exclusively illegal drugs, controlled substances, contraband, or prohibited goods as defined in Missouri Revised Statutes Chapter 195, Drug Regulations, Section 195.017. Revised, updated, or corrected sections of Chapter 195 that define illegal drugs are also authorized for incineration
 - B. Arnold Police Department shall maintain the temperature in the final combustion chamber at or above 1,400 degrees Fahrenheit.
 - C. The incinerator (EU-01) shall have opacity of less than ten percent (10%) at all times, this includes during stirring of the incinerator. Opacity less than 10 percent does not contain soot or black smoke.
 - D. Arnold Police Department shall only burn charcoal or clean wood as fuel during a burn cycle. Paper is allowed during startup. Use of lighter fluid or similar fire starting fluids or materials made for fire starting is not authorized.
 - E. Arnold Police Department shall maintain an accurate record of each batch incinerated that will include the following:
 - 1) Item combusted,
 - 2) the date combusted,
 - 3) a court case or other criminal identification marker associated with the item combusted,
 - 4) the temperature of the exhaust,
 - 5) observation that the exhaust is clean of soot and less than 10 percent opacity, and
 - 6) the approximate weight of the items incinerated.
 - F. Attachment A or a form approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A, 1.B,

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

1.C, 1.D, and 1.E. A continuous chart or electronic recorder may be used to record the exhaust temperature in lieu of recording on Attachment A.

2. Requirements for Operators of the Drug Terminator (EU-01)
 - A. The incinerator shall be operated only if it is in sound mechanical condition. The entire unit should be free from holes, dents, damage and the door/or lid seals shall function as designed. Compliance shall be determined by monthly inspection of the unit and a log of the inspection shall be kept by Arnold Police Department. The inspection shall include the name of the person making the inspection, any repair actions, and replacement parts, etc.
 - B. The Drug Terminator operator shall have the essential steps necessary for satisfactory operation of the incinerator readily available to him or her in an easy to read and follow manual.
3. Restriction of Emission of Odors
If a continued situation of verified nuisance odors exists in violation of 10 CSR 10-6.165, the Director may require through written notice that Arnold Police Department submits within ten days a corrective action plan adequate to timely and significantly mitigate the odors. Arnold Police Department shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan shall be in violation of this permit.
4. Record Keeping and Reporting Requirements
 - A. Arnold Police Department shall maintain all records required by this permit for not less than 5 years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used.
 - B. Arnold Police Department shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2012-05-106
Installation ID Number: 099-0170
Permit Number:

Arnold Police Department
2101 Jeffco Boulevard
Arnold, MO 63010

Complete: May 29th, 2012

Parent Company:
Arnold Police Department
2101 Jeffco Boulevard
Arnold, MO 63010

Jefferson County, LG 2991

REVIEW SUMMARY

- Arnold Police Department has applied for authority to install one Drug Terminator.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment due to the operation of the Drug Terminator. All HAP emissions are below their respected Screening Model Action Level (SMAL).
- None of the New Source Performance Standards (NSPS) apply to the installation. 40 CFR 60 Subpart EEEE, "Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced after December 9, 2004, or for Which Modification or Reconstruction is Commenced on or after June 16, 2006" does not apply because the Drug Terminator is owned by a government agency and is restricted to burning only illegal drugs, controlled substances, contraband, or prohibited goods.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A carbon filter is being used to control the odor emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all criteria pollutants are below de minimis levels. Section (1)(B) requires all incinerators to obtain construction permits.
- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and the PM-2.5 standard and an attainment area for all other criteria pollutants. Part Jefferson County is a nonattainment area for lead. The installation

is not located in the Jefferson County lead nonattainment area.

- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 100 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

A Drug Terminator incinerator will be used to destroy exclusively illegal drugs, controlled substances, contraband, or prohibited goods. The incinerator is not authorized to be operated at any other location. The unit is portable and offsite storage of the unit between operation events is allowed. The burn rate is 10 pounds of contraband or prohibited goods per hour. The operating temperature is 1,800 degrees Fahrenheit according to the manufacturer, 1,400 degrees is the recommended minimum temperature for combustion incineration. Ordinary consumer charcoal briquettes and clean wood fuel the incinerator. The unit can burn clean wood and paper to start the charcoal. Clean wood is free from contact with hazardous materials such as certain types of paints. The unit will hold 10 pounds of charcoal at a time. Recharging of fuel (charcoal or clean wood) during a burn cycle and stirring of the fire bed will occur to extend the cycle time of the unit. The unit can be reloaded with contraband or prohibited goods when the unit's exhaust is at or above 1,400 degrees Fahrenheit. The exhaust emissions are routed through a carbon filter.

All incinerators are required to obtain a permit in the State of Missouri. This unit is considered an institutional waste incinerator. It is used for the destruction of illegal drugs, contraband, or prohibited goods. It is located in Jefferson County. It is the only emission source located on the site and it is a de minimis source. According to the application, the incinerator is located 265.7 feet from the nearest property boundary. No permits have been issued to Arnold Police Department from the Air Pollution Control Program.

This unit can burn or incinerate those items that are in the possession of the Arnold Police Department or other similar governmental agencies that are considered to be illegal drugs as defined in Missouri Revised Statutes Chapter 195, Drug Regulations, Section 195.017. Revised or updated or corrected sections of Chapter 195, Drug Regulations that define illegal drugs are authorized for incineration. In addition, items that are found to be in their possession by legal court action or due process of the legal system are considered to be illegal or contraband or prohibited goods.

The Drug Terminator is not permitted to cremate non-infectious human bodies and body parts. It is not authorized to incinerate medical/infectious waste as defined in the Code of Federal Regulations, 40 CFR 60.51, *Standards of Performance for New Stationary Sources*, Subpart Ec—“Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996” unless it is an illegal drug, contraband or prohibited goods. Subpart Ec, could be applied if items are not identifiable as contraband, illegal drugs or prohibited goods. The rule defines medical/infectious waste as:

Medical/infectious waste means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals that are listed in paragraphs (1) through (7) of this definition. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in part 261 of this chapter; household waste, as defined in §261.4(b)(1) of this chapter; ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment or cremation; and domestic sewage materials identified in §261.4(a)(1) of this chapter.

- (1) Cultures and stocks of infectious agents and associated biologicals, including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.
- (2) Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids and their containers.
- (3) Human blood and blood products including:
 - (i) Liquid waste human blood;
 - (ii) Products of blood;
 - (iii) Items saturated and/or dripping with human blood; or
 - (iv) Items that were saturated and/or dripping with human blood that are now caked with dried human blood; including serum, plasma, and other blood components, and their containers, which were used or intended for use in either patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also include in this category.
- (4) Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.

- (5) Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals or testing of pharmaceuticals.
- (6) Isolation wastes including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from certain highly communicable diseases, or isolated animals known to be infected with highly communicable diseases.
- (7) Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition. Knowing that the incinerator will periodically incinerate pharmaceuticals that would be characterized as a medical waste, the Potential to Emit was calculated from emission factors from a controlled air medical waste incinerator.

Particulate matter is emitted as a result of incomplete combustion of organics (i. e., soot) and by the entrainment of noncombustible ash due to the turbulent movement of combustion gases. Particulate matter may exit as a solid or an aerosol, and may contain heavy metals, acids, and/or trace organics. Uncontrolled particulate emission rates vary widely, depending on the type of incinerator, composition of the waste, and the operating practices employed. Entrainment of PM in the incinerator exhaust is primarily a function of the gas velocity within the combustion chamber containing the solid waste. Controlled air incinerators have the lowest turbulence but it is turbulent and, consequently, the lowest PM emissions; rotary kiln incinerators have highly turbulent combustion, and thus have the highest PM emissions. This unit appears to be closer to a controlled air unit than a rotary kiln and controlled air incineration was chosen over excess air to calculate the emission rates. The emission rates are from Table 2.3-1 *Emission Factors for NO_x, CO, and SO_x for Controlled Air Medical Waste Incinerators* and Table 2.3-2 *Emission Factors for Total Particulate Matter, Lead, and Total Organic Compounds (TOC) for Controlled Air Medical Waste Incinerators* found in *Medical Waste Incineration, 1993* under Section 2, *Solid Waste Disposal* of AP-42. Emissions of particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) were assumed to be equal to particulate matter less than ten microns in aerodynamic diameter (PM₁₀) because an emission factor for PM_{2.5} is not available. The emission factors used in the analysis of Hazardous Air Pollutants (HAP) emissions were obtained from the Environmental Protection Agency (EPA) Factor Information Retrieval Data System (FIRE) Source Classification Code (SCC) 5-02-005-05.

Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/A	N/A	0.102	N/A
SO _x	40.0	N/A	N/A	0.048	N/A
NO _x	40.0	N/A	N/A	0.078	N/A
VOC	40.0	N/A	N/A	0.007	N/A
CO	100.0	N/A	N/A	0.065	N/A
Lead	25.0	N/A	N/A	0.002	N/A
HAPs	10.0/25.0	N/A	N/A	0.938	N/A
CO ₂	N/A	N/A	N/A	200.39	N/A
GHG (mass)	0/100/250	N/A	N/A	200.39	N/A
GHG (CO ₂ e)	75,000/100,000	N/A	N/A	200.39	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all criteria pollutants are below de minimis levels. 10 CSR 10-6.060 Section (1)(B) requires all incinerators to obtain construction permits.

APPLICABLE REQUIREMENTS

Arnold Police Department shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Janelle Lewis
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 29th, 2012, received May 29th, 2012, designating Arnold Police Department as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Factor Information Retrieval Data System (FIRE)

Mr. Omar Ruiz
Detective
Arnold Police Department
2101 Jeffco Boulevard
Arnold, MO 63010

RE: New Source Review Permit - Project Number: 2012-05-106

Dear Mr. Ruiz:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Janelle Lewis, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:jl

Enclosures

c: St. Louis Regional Office
PAMS File: 2012-05-106

Permit Number: