

AIR EMISSIONS CONTROL PROGRAM

INTRODUCTION

The purpose of this chapter is to ensure that air emissions originating from Fermilab operations comply with USEPA, IEPA and Kane and DuPage counties air pollution regulations, all conditions listed in the Fermilab Illinois Air Pollution Control Operating Permit (referred to as a Lifetime Operating Permit) and with DOE Order 450.1. The Laboratory shall also comply with all restrictions and requirements on the use of materials (such as ozone depleting substances) regulated by the Clean Air Act and with rules governing the acquisition of fleet vehicles in the Chicago ozone nonattainment area.

Air emissions are regulated under the federal Clean Air Act (CAA) and its amendments. This law requires EPA to establish national pollutant standards for ambient air called National Ambient Air Quality Standards (NAAQS). The law further requires that each state prepare a state implementation plan (SIP) that indicates how the state will regulate mobile and stationary sources to ensure that the air quality in the state complies with the NAAQS. Illinois air pollution regulations are found in Subtitle B of Title 35 of the Illinois Administrative Code (IAC) and are summarized by applicable (those applying to Fermilab operations) topic in Appendix A. These regulations describe general requirements for air emission units, such as permit requirements, prohibitions on or permits required for open burning, emission monitoring, organic solvent use, and vehicle acquisition requirements in the Chicago ozone nonattainment area. It is Fermilab's intent to fully comply with these regulations and with the conditions of its Lifetime Operating Permit (see Appendix D) and to minimize, to the extent possible, pollution-causing air emissions.

While previously stated that air emissions are regulated under the CAA, Fermilab is not subject to the Clean Air Act Permit Program (CAAPP) nor does it hold a Federally Enforceable State Operating Permit (FESOP). These types of permits generally cover larger or more significant emission sources, from an air pollution perspective; Fermilab is NOT a CAA defined "major source." Fermilab does, however, hold a National Emission Standard for Hazardous Air Pollutants (NESHAP) Lifetime Operating Permit (see Appendix D), issued by the Illinois Environmental Protection Agency, Division of Air Pollution Control. This permit regulates the operation of the following units: Magnet Debonding Oven with Afterburner; Three Natural Gas Fired Boilers with Firing Rate of 15 mmBtu/Hour, Each; Gasoline Dispensing Facility with one 12,000 Gallons Gasoline Storage Tank Equipped with Permanent Submerged Loading, with Stage 1 and Stage 2 Vapor Balance System; Radionuclide Emission Stacks

Open Top Vapor Degreaser; One Emergency Standby Diesel Fuel Fired Engine – Generator with Nominal Capacity of 2,220 Horsepower and Collider Detector at Fermilab (CDF) Gas Circulating System and Main Injector Particle Production (MIPP) Experiment Gas System. The permit does not require renewal or reapplication unless requested by the Agency for certain defined reasons.

DEFINITIONS

Ambient Air – that portion of the atmosphere that is external to buildings.

Air Toxics – See Hazardous Air Pollutants below.

Chicago Ozone Nonattainment Area – an area designated by EPA as being out of compliance with the National Ambient Air Quality Standard (NAAQS) for ozone. It includes the counties of Cook, DuPage, Kane, McHenry, and Will.

Clean Air Act Section 112(r) list – a list of 77 toxic and 63 flammable substances developed by EPA and mandated by Congress which if used in a process triggers the requirement of having a risk management plan (RMP) in place. These requirements are codified in 40 CFR Part 68; substances are listed at 40 CFR Part 68, Subpart H, Section 68.130.

Clean Fuel Fleet Vehicle – a light duty or heavy duty vehicle that has been certified by EPA meeting the requirements needed for compliance with the state of Illinois Clean Fuel Fleet Program.

Cold Cleaning – the process of cleaning and removing soils from surfaces by spraying, brushing, flushing, or immersion while maintaining the organic solvent below its boiling point. Wipe cleaning is not included in this definition.

Criteria Pollutants – pollutants for which EPA has promulgated National Ambient Air Quality Standards. These are sulfur dioxide, carbon monoxide, nitrogen dioxide, lead, ozone, and particulate matter.

Degreaser – any equipment or system that uses solvent to clean solid objects.

Emission Unit – any part or activity at a stationary source that emits or has the potential to emit any air pollutant.

Emission Source – any equipment or facility of a type capable of emitting specified air contaminants to the atmosphere.

Hazardous Air Pollutants (HAPs) – EPA refers to chemicals that cause serious health and environmental hazards as hazardous air pollutants or air toxics.

There are 188 of these chemicals and chemical classes listed in Section 112(b) of the Clean Air Act, for which emission standards have been established.

Major Source - any stationary source that has the potential to emit 100 tons per year or more of any criteria air pollutant, 10 tons per year or more of any one of the 188 HAPs, or 25 tons of any combination of HAPs.

Mobile Source - road vehicles (e.g. automobiles, trucks, and motorcycles) and nonroad vehicles (e.g. trains, airplanes, agricultural equipment, industrial equipment, construction vehicles, off-road motorcycles, and marine vessels).

Monitor - to measure and record.

Ozone Depleting Substances - any of several classes of organic compounds including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, and related chlorinated compounds that have been designated by EPA as contributing to the destruction of stratospheric ozone.

Specified Air Contaminant - any air contaminant which has an emission standard or other specific limitations listed in 35 IAC Subtitle B and any contaminant (for example, carbon monoxide, particulate matter, nitrogen oxides, sulfur dioxides, lead, volatile organic materials, total particulates, organic material, dioxins, furans, fluorides, hydrogen chloride, hydrogen sulfide, sulfuric acid mist, or sulfur compounds) regulated in Illinois pursuant to Section 9.1 of the Act. In addition, it includes most of the 188 HAPs regulated under and listed in Section 112(b) of the Clean Air Act Amendments of 1990.

Stationary Source - any building, structure, facility, or installation that emits or may emit any air pollutant.

RESPONSIBILITIES

Division/Sections shall ensure that:

- Permits are obtained for air emission units within their organizations as required by the applicable regulations (see Appendix A for topical list of regulatory requirements and Appendix B for list of equipment that is exempt from permitting).
- The rationale for any determination that an air emission unit within the organization is exempt from permitting is documented (see Appendix B).
- Air emission units listed in the permit (see Appendix D) are operated in compliance with permit conditions (for example: conduct emission monitoring; install, operate, and maintain any required control systems; fulfill record keeping and reporting requirements as mandated in the permit; transmit all necessary reports to ES&H Section; and report any permit noncompliances to the ES&H Section immediately).

- All future operations are reviewed, in consultation with the ES&H Section, for the necessity of new or revised air permits (see Appendix C for construction permitting decision making questionnaire) and, if a permit is required, sufficient information to complete an application is submitted to the ES&H Section.
- Emissions from all applicable airborne radiological emission units are characterized and monitored as required to maintain compliance with the radionuclide NESHAP and DOE orders and to maintain all emissions as low as reasonably achievable.
- Procedures are written and approved for operating the monitoring system, identifying a person who will operate and maintain the system, and providing a quality assurance/quality control program.
- The storage and usage of any materials meets the compliance requirements for Clean Air Act Section 112(r), cold cleaning degreasers, coating operations, and ozone depleting substances (see Appendix A).
- Acquisition of Class I Ozone Depleting Substances (see 40 CFR Part 82 for listing) is prohibited unless specifically approved by the Division/Section Senior Safety Officer (SSO).

Business Services Section shall ensure that:

- Any vehicle acquisitions comply with Illinois Clean Fuel Fleet requirements (see Appendix A).

ES&H Section, Environmental Team shall ensure that:

- Consultation is given to Division/Section that are evaluating new activities to assist in determining whether an air pollution construction permit is necessary or whether a modification should be requested for the Fermilab Lifetime Operating Permit.
- An air related permit application is reviewed for completeness and accuracy and then arrangement is made for transmittal to IEPA via DOE.
- Copies of approved permits are provided to applicable Divisions/Sections.
- Files of all environmental permit applications, permits, and related documents are maintained.
- Environmental air permit annual emission reports are submitted in a timely manner.

ES&H Section, Safety Team is responsible for asbestos removal projects. They shall ensure that:

- Air samples are collected
- Records are generated to document compliance with the asbestos NESHAP
- Annual notification to IEPA of the total amount of asbestos removed during renovation or demolition is prepared.

- Procedures involving asbestos characterization, reporting, and removal are developed and maintained

ES&H Section, Radiation Protection Group shall, with regard to radionuclides, calculate and report the estimated committed effective dose equivalent to the maximally exposed member of the public. This includes the performance of appropriate characterization measurements as well as the maintenance and operation of the associated instrumentation. In addition, this team shall arrange for the estimated dose calculations to be transmitted to the ES&H Section, Environmental Team who shall ensure that an appropriate NESHAPs Report is filed with the USEPA, IEPA, and DOE.

PROGRAM DESCRIPTION

Fermilab air emissions are governed by air pollution control regulations as summarized by topic in Appendix A, by DOE orders, and by the Fermilab Lifetime Operating Permit (see Appendix D). Divisions/Sections develop and implement, as needed, procedures to ensure compliance with these requirements.

The current Lifetime Operating Permit, issued on March 6, 2006 allows for the operation of the following emission unit(s) and /or air pollution control equipment:

- Magnet Debonding Oven with Afterburner
- Three Natural Gas Fired Boilers with Firing Rate of 15 mmBtu/Hour, Each
- Gasoline Dispensing Facility with one 12,000 Gallons Gasoline Storage Tank Equipped with Permanent Submerged Loading, with Stage 1 and Stage 2 Vapor Balance System,
- Radionuclide Emission Stacks
- Open Top Vapor Degreaser, and
- One Emergency Standby Diesel Fuel Fired Engine - Generator with Nominal Capacity of 2,220 Horsepower
- Collider Detector at Fermilab (CDF) Gas Circulating System and Main Injector Particle Production (MIPP) Experiment Gas System

These are the only permitted emissions sources at Fermilab. All other existing air emissions sources are exempt from permitting (see Appendix B for listing of exemptions); the Division/Section operating an exempt emission source documents the specific applicable exemption. When a new air emission source or modification to an existing source is proposed, the Division/Section consults with the ES&H Section to determine whether a construction permit will be required (see Appendix C for the decision making questionnaire).

The Division/Section operating the above listed permitted emission sources develops procedures to ensure compliance with the Fermilab Lifetime Operating Permit (see Appendix D) and for submitting all necessary documentation to the ES&H Section in a timely manner.

The ES&H Section submits the environmental air permit annual emission reports to the DOE in a timely manner so that the reports may be transmitted to IEPA by the regulatory due date. In addition, the ES&H Section calculates and reports the estimated committed effective dose equivalent to the maximally exposed member of the public and reports this to the DOE for transmittal to the USEPA, IEPA, and DOE Headquarters by the regulatory deadline.

APPENDIX A

The following is a summarized description, listed alphabetically by topic, of the regulatory requirements governing existing or potential air emissions at Fermilab.

Asbestos [35 IAC Part 228]

The asbestos NESHAP standards require that the IEPA be notified before large asbestos removal projects (involving more than 260 feet of pipe insulation or 160 square feet of other material) are begun. Renovation or demolition involving asbestos-containing material must be done in compliance with the work practice standards in the above-designated regulations.

Clean Air Act 112(r) See Toxic or Flammable Substance below.

Coating Operations [35 IAC, Part 218, Subpart F]

These regulations limit emissions resulting from coating ("Coating" means, for purposes of 35 Ill. Adm. Code 218 and 219, a material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, adhesives, thinners, diluents, and inks.) operations (for example spray paint booths). The limits are expressed in units of Volatile Organic Material (VOM) per volume of coating as applied at each coating applicator. Compliance with this Subpart is demonstrated through the applicable coating analysis test methods and procedures specified in Section 218.105(a) and the recordkeeping and reporting requirements specified in Section 218.211(c) except where noted.

Cold Cleaning [35 IAC, Part 218, Subpart E]

These regulations limit the maximum vapor pressure of organic solvents that can be used in cold cleaning operations in the Chicago ozone nonattainment area (this includes Kane and DuPage counties where Fermilab is located). As of March 15, 2001, no operation of a cold cleaning degreaser in the Chicago ozone nonattainment area can utilize a cleaner with a solvent vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). All persons subject to the above requirement must retain for three years records that include for each purpose: 1) name and address of solvent supplier; 2) date of purchase; 3) type of solvent; and 4) vapor pressure of solvent measured at 20°C (68°F). The cleaning of electronic components is exempt from these requirements, and wipe cleaning is not included in the definition of cold cleaning.

Criteria Pollutants [35 IAC Subtitle B; 40 CFR 50]

Fermilab has a number of sources (magnet debonding oven, Besco boilers, gasoline dispensing facility, radionuclide emissions stacks, and the open top vapor degreaser) of criteria pollutants (sulfur dioxide, carbon monoxide, nitrogen dioxide, lead, ozone, and particulate matter). IEPA regulations

establish limits for criteria pollutants and enforce these limits through a permit system. The Fermilab Lifetime Operating Permit establishes limits for all permitted criteria pollutant sources on site.

Fleet Vehicles [35 IAC Part 241]

IEPA requires that a specified percentage of all annually acquired light duty and heavy-duty vehicles (including leasing) be clean fuel fleet certified. Some vehicles are exempted from meeting the percentage, but all must be reported to IEPA on an annual basis. These regulations apply only to fleets based in the Chicago ozone nonattainment area (this includes Kane and DuPage counties where Fermilab is located).

Hazardous Air Pollutants (HAPs) [35 IAC Subtitle B; 40 CFR 61]

Fermilab has a few sources (radionuclide emission stacks, magnet debonding oven) of HAPs (radionuclides). Emission limits on these sources are also regulated by permit (see Radionuclides below) for Fermilab. The Clean Air Act requires the EPA to establish a National Emission Standard (NES) for each HAP, referred to as NESHAP.

New Air Emission Sources [35 IAC Part 201.102]

Before any equipment that can emit criteria or hazardous air pollutants can be purchased, constructed, modified, or operated, an IEPA air construction and/or operating permit must be obtained, unless the emission unit is specifically exempted (see Appendix B). In addition, many activities utilizing air pollution control devices require an IEPA permit. Before proceeding with any above-mentioned activities, the ES&H Section Environmental Team should be consulted.

Ozone Depleting Substances (ODS) [40 CFR 82]

These regulations cover federal procurement, usage, labeling, recycling, and alternatives for chemicals designated by EPA as contributing to the destruction of stratospheric ozone. They also require that all chillers, air conditioners (including mobile source units) and other refrigeration units be serviced by EPA-certified technical personnel. In addition, these regulations cover annual leak rate limitations and associated repair/replacement requirements.

A statutory venting prohibition requires that all ODSs removed from units be recovered for recycling. As of May 14, 2001 purchasers of newly manufactured or imported Class I ODSs for laboratory or analytical uses must submit a one-time-per year certification to suppliers stating that the ODSs will not be used in manufacturing or resold.

Radionuclide [35 IAC Subtitle B; 40 CFR 61, Subpart H]

The NESHAP regulation establishes standards for radionuclide emissions (other than point sources of radon-220 and -222) from DOE facilities and imposes

monitoring, reporting, and record keeping requirements. The NESHAP regulation limits the effective dose equivalent (EDE) to the maximally exposed member of the public due to radionuclide emissions from all sources to 10 mrem/year and requires a continuous monitoring of any stack that has the potential to produce an EDE of 0.1 mrem/year. In addition, Fermilab has an internal policy that requires air emissions to be maintained as low as reasonably achievable (ALARA) and has set an internal goal of 1 mrem/year to the maximally exposed individual. Fermilab is responsible for the measurement of annual radionuclide emissions. The computer simulation model CAP-88PC is used to calculate the dose.

Toxic or Flammable Substances [40 CFR Part 68]

The Clean Air Act Section 112(r) requires that any process containing toxic or flammable substance on the 112(r) list (substances are listed at 40 CFR Part 68, Subpart F, Section 68.130) that exceeds the specified threshold to have a Risk Management Plan (RMP) on file with IEPA. The RMP must be on file prior to establishing a process with a listed substance on site.

APPENDIX B

Exemptions from State Permitting Requirements (Title 35 IAC, Subtitle B, Chapter I, Subchapter a, Part 201, Subpart C, Section 201.146)

Construction or operation permits are not required for the classes of equipment and activities listed below. The permitting exemptions in this Section do not relieve the owner or operator of any source from any obligation to comply with any other applicable requirements:

- a) Air contaminant detectors or recorders, combustion controllers or combustion shutoffs;
- b) Air conditioning or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment;
- c) Each fuel burning emission unit for indirect systems for heating and reheating furnace systems used exclusively for residential, or commercial establishments using gas and/or fuel oil exclusively with a design heat input capacity of less than 14.6 MW (50mmbtu/hr), except that a permit shall be required for any such emission unit with a design heat input capacity of at least 10 mmbtu/hr that was constructed, reconstructed or modified after June 9, 1989 and that is subject to 40 CFR 60, Supart D;
- d) Each fuel burning emission unit other than those listed in subsection(c) of this Section for direct systems used for comfort heating purposes and indirect heating systems with a design heat input capacity of less than 2930 kW (10 mmbtu/hr);
- e) Internal combustion engines or boilers (including the fuel system) of motor vehicles, locomotives, air craft, watercraft, lift trucks, and other vehicles powered by non-road engines;
- f) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated laboratory fume hoods, vacuum producing devices and control devices installed primarily to address potential accidental releases;
- g) Coating operations located at a source using not in excess of 18,925 liters (5000 gallons) per year;
- h) Any emission unit acquired exclusively for domestic use, except that a permit shall be required for any incinerator and for any fuel

combustion emission unit using solid fuel with a design heat input capacity of 14.6 MW (50 mmbtu/hr) or more;

- i) Any stationary internal combustion engine with a rated power output of less than 1118 kW(1500 horsepower), except that a permit shall be required for any stationary gas turbine engine with a rated heat input at peak load of 10.7 gigajoules/hr (10 mmbtu/hr) or more that is constructed, reconstructed or modified after October 3, 1977 and that is subject to requirements of 40 CFR 60, Subpart GG;
- j) Rest room facilities and associated cleanup operations, and stacks or vents used to prevent the escape of sewer gases through plumbing traps;
- k) Safety devices designed to protected life and limb, provided that a permit is not otherwise required for the emission unit with which the safety device is associated;
- l) Storage tanks for liquids for retail dispensing except for storage tanks that are subject for the requirements of 35 Ill. Adm. Code 215.583(a)(2), 218.583(a)(2), or 219.583(a)(2);
- m) Printing operations with aggregate organic solvent usage that never exceeds 2,839 liters (750 gal) per year from all printing lines at the source, including organic solvent from inks, diluents, fountain solutions, and cleaning materials;
- n) Storage tanks of:
 - 1) Organic liquids with a capacity of less than 37,850 liters (10,000 gal), provided the storage tank is not used to store any material listed as a hazardous air pollutant pursuant to Section 112(b) of the Clean Air Act, and provided the storage tank is not subject to the requirements of 35 Ill. Adm. Code 215.583(a)(2), 218.583(a)(2) or 219.583(a)(2);
 - 2) Any size containing exclusively soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetner, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials; or
 - 3) Any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil or residual fuel oils.

- o) Threaded pipe connections, vessel manways, flanges, valves, pump seals, pressure relief valves, pressure relief devices and pumps;
- p) Sampling connections used exclusively to withdraw materials for testing and analyses;
- q) All storage tanks of Illinois crude oil with capacity of less than 151,400 liters (40,000 gal) located on oil field sites;
- r) All organic material-water single or multiple compartment effluent water separator facilities for Illinois crude oil of vapor pressure of less than 34.5kPa absolute (5 psia);
- s) Grain-handling operations, exclusive of grain-drying operations, with an annual grain through-put not exceeding 300,000 bushels;
- t) Grain-drying operations with a total grain-drying capacity not exceeding 750 bushels per hour of 5% moisture extraction at manufacturers rated capacity, using the American Society of Agricultural Engineers Standard 248.2, Section 9, Basis for Stating Drying Capacity of Batch and Continuous-Flow Grain Dryers;
- u) Portable grain-handling equipment and one-turn storage space;
- v) Cold cleaning degreasers that are not in-line cleaning machines, where the vapor pressure of the solvents used never exceeds 2 kPa (15 mmHg or 0.3 psi) measured at 38 C (100 F) or 0.7 kPa (5 mmHg or 0.1 psi) at 20 C (68 F);
- w) Coin-operated dry cleaning operations;
- x) Dry cleaning operations at a source that consume less than 30 gallons per month of perchloroethylene;
- y) Brazing, soldering, waver soldering, or welding equipment, including associated ventilation hoods;
- z) Cafeterias, kitchens, and other similar facilities, including smokehouses, used for preparing food or beverages, but not including facilities used in the manufacturing and wholesale distribution of food, beverages, food or beverage products, or food or beverage components;
- aa) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planning, buffing, sand blast

cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals (other than beryllium), plastics, concrete, rubber, paper stock, wood or wood products, where such equipment is either:

- 1) Used for maintenance activity;
 - 2) Manually operated;
 - 3) Exhausted inside a building; or
 - 4) Vented externally with emissions controlled by an appropriately operated cyclonic inertial separator (cyclone), filter, electro-static precipitator or a scrubber;
- bb) Feed mills that produce no more than 10,000 tons of feed per calendar year, provided that a permit is not otherwise required for the source pursuant to Section 201.142, 201.143, or 201.144;
- cc) Extruders used for the extrusion of metals, minerals, plastics, rubber or wood, excluding:
- 1) Extruders used for the extrusion of metals, minerals, plastics, rubber or wood, excluding: Extruders used in the manufacture of polymers;
 - 2) Extruders using foaming agents or release agents that contain volatile organic materials or Class I or II substances subject to the requirements of Title VI of the Clean Air Act; and
 - 3) Extruders processing scrap material that was produced using foaming agents containing volatile organic materials or Class I or II substances subject to the requirements of Title VI of the Clean Air Act.
- dd) Furnaces used for melting metals, other than beryllium, with a brim full capacity of less than 450 cubic inches by volume;
- ee) Equipment used for the melting or application of less than 22,767 kg/yr (50,000 lbs/yr) of wax to which no organic solvent has been added;
- ff) Equipment used for filling drums, pails or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials;
- gg) Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquids materials, soaps detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases,

animal fats, sweetner, corn syrup, aqueous salt, solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials;

- hh) Equipment used for the mixing and blending of materials at ambient temperatures to make water based adhesives, provided each material mixed or blended contains less than 5% organic solvent by weight;
- ii) Die casting machines where a metal or plastic is formed under pressure in a die located at a source with a throughput of less than 2,000,000 lbs of metal or plastic per year, in the aggregate, from all die casting machines;
- jj) Air pollution control devices used exclusively with other equipment that is exempt from permitting, as provided in this Section;
- kk) An emission unit for which a registration system designed to identify sources and emission units subject to emission control requirements is in place, such as the registration system found at 35 Ill. Adm. Code 218.586 (Gasoline Dispensing Operations-Motor Vehicle Fueling Operations) and 35 Ill. Adm. Code 218, Subpart HH (Motor Vehicle Refinishing);
- ll) Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy;
- mm) Equipment used for hydraulic or hydrostatic testing;
- nn) General vehicle maintenance and servicing activities conducted at a source, motor vehicle repair shops, and motor vehicle body shops, but not including:
 - 1) Gasoline fuel handling; and
 - 2) Motor vehicle refinishing
- oo) Equipment using water, water and soap or detergent, or a suspension of abrasive in water for purposes of cleaning or finishing, provided no organic solvent has been added to the water;
- pp) Administrative activities including, but not limited to, paper shredding, copying, photographic activities and blueprinting machines. This does not include incinerators;
- qq) Laundry dryers, extractors, and tumblers processing that have been cleaned with water solutions of bleach or detergents that are:

- 1) Located at a source and process clothing, bedding and other fabric items used at the source, provided that any organic solvent present in such items before processing that is retained from cleanup operations shall be addressed as part of the VOM emissions from use of cleaning materials;
 - 2) Located at a commercial laundry; or
 - 3) Coin operated
- rr) Housekeeping activities for cleaning purposes, including collecting spilled and accumulated materials, including operation of fixed vacuum cleaning systems specifically for such purposes, but not including use of cleaning materials that contain organic solvent;
- ss) Refrigeration systems, including storage tanks used in refrigeration systems, but excluding any combustion equipment associated with such systems;
- tt) Activities associated with the construction, on-site repair, maintenance or dismantlement of buildings, utility lines, pipelines, wells, excavations, earthworks and other structures that do not constitute emission units;
- uu) Piping and storage systems for natural gas, propane and liquefied petroleum gas;
- vv) Water treatment or storage systems, as follows:
 - 1) Systems for potable water or boiler feedwater;
 - 2) Systems including cooling towers, for process water, provided that such water has not been in direct or indirect contact with process streams that contain volatile organic material or materials listed as hazardous air pollutants pursuant to Section 112(b) of the Clean Air Act.
- ww) Lawn care, landscape maintenance and grounds keeping activities;
- xx) Containers, reservoirs or tanks used exclusively in dipping operations to coat objects with oils, waxes or greases, provided no organic solvent has been mixed with such materials;
- yy) Use of consumer products, including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.), where the produce is used at a source in the same manner as normal consumer use;

- zz) Activities directly used in the diagnosis and treatment of disease, injury or other medical condition;
- aaa) Activities associated with the construction, repair or maintenance of roads or other paved or open areas, including operation of street sweepers, vacuum trucks, spray trucks and other vehicles related to the control of fugitive emissions of such roads or other areas;
- bbb) Storage and handling of drums or other transportable containers, where the containers are sealed during storage and handling;
- ccc) Activities at a source associated with the maintenance, repair or dismantlement of an emission unit or other equipment installed at the source, not including the shutdown of the unit or equipment, including preparation for maintenance, repair or dismantlement, and preparation for subsequent startup, including preparation of a shutdown vessel for entry, replacement of insulation, welding and cutting, and steam purging of a vessel prior to startup;
- ddd) Equipment used for corona arc discharge surface treatment of plastic with a power rating of 5 kW or less or equipped with an ozone destruction device;
- eee) Equipment used to seal or cut plastic bags for commercial, industrial, or domestic use;
- fff) Each direct-fired gas dryer used for a washing, cleaning, coating, or printing line, excluding:
 - 1) Dryers with a rated heat input capacity of 2930 kW (10 mmbtu/hr) or more; and
 - 2) Dryers for which emissions other than those attributable to combustion of fuel in the dryer, including emissions attributable to use or application of cleaning agents, washing materials, coatings or inks or other process materials that contain volatile organic material are not addressed as part of the permitting of such line, if a permit is otherwise required for the line; and
- ggg) Municipal solid waste landfills with a maximum total design capacity of less than 2.5 million Mg or 2.5 million cubic meters that are not required to install a gas collection and control system pursuant to 35 Ill. Adm. Code 220 or 800 through 849 or Section 9.1 or the Act.
- hhh) Replacement or addition of air pollution control equipment for existing emission units in circumstances where:

- 1) The existing emission unit is permitted and has operated in compliance for the past year;
- 2) The new control equipment will provide equal or better control of the target pollutants;
- 3) The new control device will not be accompanied by a net increase in emissions of any non-targeted criteria air pollutant;
- 4) Different State or federal regulatory requirements or newly proposed regulatory requirements will not apply to the unit; and BOARD NOTE: All sources must comply with underlying federal regulations and future State regulations.
- 5) Where the existing air pollution control equipment had required monitoring equipment, the new air pollution control equipment will be equipped with the instrumentation and monitoring devices that are typically installed on the new equipment of that type. BOARD NOTE: For major sources subject to Section 39.5 of the Act, where the new air pollution control equipment will require a different compliance determination method in the facility's CAAPP permit, the facility may need a permit modification to address the changed compliance determination method.

iii) Replacement, addition, or modification of emission units at facilities with federally enforceable State operating permits limiting their potential to emit in circumstances where:

- 1) The potential to emit any regulated air pollutant in the absence of air pollution control equipment from the new emission unit, or the increase in the potential to emit resulting from the modification of any existing emission unit, is less than 0.1 pound per hour or 0.44 tons per year;
- 2) The raw materials and fuels used or present in the emission unit that cause or contribute to emissions, based on the information contained in Material Safety Data Sheets for those materials, do not contain equal to or greater than 0.01 percent by weight of any hazardous air pollutant as defined under Section 112(b) of the federal Clean Air Act;
- 3) The emission unit or modification is not subject to an emission standard or other regulatory requirement pursuant to Section 111 of the federal Clean Air Act;
- 4) Potential emissions of regulated air pollutants from the emission unit or modification will not, in combination with emissions from existing units or other proposed units, trigger permitting requirements under Section 39.5, permitting requirements under Section 165 or 173 of the federal Clean Air Act, or the requirement to obtain a revised federally enforceable

State operating permit limiting the source's potential to emit;
and

- 5) The source is not currently the subject of a Non-compliance Advisory, Clean Air Act Section 114 Request, Violation Notice, Notice of Violation, Compliance Commitment Agreement, Administrative Order, or civil or criminal enforcement action, related to the air emissions of the source.

jjj) Replacement, addition, or modification of emission units at permitted sources that are not major sources subject to Section 39.5 and that do not have a federally enforceable state operating permit limiting their potential to emit, in circumstances where:

- 1) The potential to emit of any regulated air pollutant in the absence of air pollution control equipment from the new emission unit, or the increase in the potential to emit resulting from the modification of any existing emission unit is either:
 - A) Less than 0.1 pound per hour or 0.44 tons per year; or
 - B) Less than 0.5 pound per hour, and the permittee provides prior notification to the Agency of the intent to construct or install the unit. The unit may be constructed, installed or modified immediately after the notification is filed;
- 2) The emission unit or modification is not subject to an emission standard or other regulatory requirement under Section 111 or 112 of the federal Clean Air Act;
- 3) Potential emissions of regulated air pollutants from the emission unit or modification will not, in combination with the emissions from existing units or other proposed units, trigger permitting requirements under Section 39.5 or the requirement to obtain a federally enforceable permit limiting the source's potential to emit; and
- 4) The source is not currently the subject of a Non-compliance Advisory, Clean Air Act Section 114 Request, Violation Notice, Notice of Violation, Compliance Commitment Agreement, Administrative Order, or civil or criminal enforcement action, related to the air emissions of the source.

kkk) The owner or operator of a CAAPP source is not required to obtain an air pollution control construction permit for the construction or modification of an emission unit or activity that is an insignificant activity as addressed by Section 201.210 or 201.211 of this Part. Section 201.212 of this Part must still be followed, as applicable. Other than excusing the owner or operator of a CAAPP source from the

requirement to obtain an air pollution control construction permit for the emission units or activities, nothing in this subsection shall alter or affect the liability of the CAAPP source for compliance with emission standards and other requirements that apply to the emission units or activities, either individually or in conjunction with other emission units or activities constructed, modified or located at the source.

- III) Plastic injection molding equipment with an annual through-put not exceeding 5,000 tons of plastic resin in the aggregate from all plastic injection molding equipment at the source, and all associated plastic resin loading, unloading, conveying, mixing, storage, grinding, and drying equipment and associated mold release and mold cleaning agents.

APPENDIX C

AIR POLLUTION CONTROL CONSTRUCTION PERMITTING DECISION MAKING QUESTIONNAIRE

In order to determine if an IEPA construction permit is needed, answer the following questions.

1. Is the equipment or facility capable of emitting specified air contaminants to the atmosphere? "Specified Air Contaminant": is any air contaminant to which the Title 35 Illinois Administrative Code, Subtitle B contains emission standards or other specific limitations and any contaminant regulated in Illinois pursuant to Section 9.1 of the Act. Air Contaminants that meet this definition include but are not limited to the following:

- Volatile Organic Material (VOM)
- Carbon Monoxide (CO)
- Nitrogen Oxides (NO_x)
- Sulfur Dioxides (SO₂)
- Lead
- Dioxins
- Furans
- Fluorides
- Hydrogen Chloride (as a gas only)
- Hydrogen Sulfide
- Sulfuric Acid Mist
- Sulfur Compounds

In Addition, it includes most of the 188 hazardous air pollutants regulated listed in Section 112(b) of the Clean Air Act Amendments of 1990.

If Yes, go to Question 2.

2. Does the emission source fit within any of the exemptions from the state construction permit requirements (see Appendix B)? If Yes, keep a record of this decision and note the regulatory citation for the exemption. If No, work with the ES&H Section to apply for a construction permit from the IEPA. If you are modifying an existing emission source, go to Question 3.
3. For an existing emission source, have you made any modifications (see Definitions) that trigger the construction permit requirements? Under the air regulations, any physical change in a permitted emission source that increases emissions will generally require a construction permit. If Yes, go to Question 4.

4. If new equipment or modifications cause increased emissions, are any other regulations triggered? The point here is to determine whether a new construction or modification will be at a major source (see Definitions) level. If the emissions would exceed the major level, then the piece of equipment or modification may need to comply with federal regulations for the prevention of significant deterioration of air quality (PSD) and 35 Ill. Adm. Code 203, New Source Review (NSR). Under the PSD requirements, the owner or operator of all subject sources are required to apply the best available control technology for each pollutant for which the source emits a large enough amount to classify the source as a major source for that pollutant, while under NSR requirements, the owner or operator is required to apply the lowest achievable emission rate.

APPENDIX D

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST
P.O. Box 19506, SPRINGFIELD, ILLINOIS 62794-9506
DOUGLAS ;,SCOTT, DIRECTOR
217/782-2113
LIFETIME OPERATING PERMIT -- NESHAP -- REVISED

PERMITTEE

U.S. Department of Energy - Fermilab
Attn. Jonathan Cooper
Wilson Road, P.O. Box 2000
Batavia, Illinois 60510

Application No.: 79070012

I.D. No.: 043807AAI

Applicant's Designation: FERMILBSITE

Date Received: February 8, 2006

Subject: Fermilab Site

Date Issued: March 6, 2006

Expiration Date: See Condition 1

Location: Fermilab, Wilson Road, Batavia, Kane County

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Magnetic Debonding Oven with Afterburner
Three Natural Gas Fired Boilers with Firing Rate of 15 mmBtu/Hour, Each ,
Gasoline Dispensing Facility with one 12,000 Gallons Gasoline Storage Tank with Equipped with
Permanent Submerged Loading, with Stage 1 and Stage 2 Vapor Balance System
Radionuclide Emission Stacks
Open Top Vapor Degreaser, and
One Emergency Standby Diesel Fuel Fired Engine - Generator with Nominal Capacity of 2,220
Horsepower
Collider Detector at Fermilab (CDF) Gas Circulating System and Main Injector Particle
Production (MIPP) Experiment Gas System

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This permit shall expire 180 days after the Illinois EPA sends a written request for the removal of this permit.
- b. This permit shall terminate if it is withdrawn or is superseded by a revised permit.
- 2a. This Department of Energy facility (DOE) is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) for radionuclide emissions, 40 CFR 61, Subparts A and H.
- b. Pursuant to the National Emission Standard for Hazardous Air Pollutants, emissions of radionuclides shall not exceed those amounts that cause a dose equivalent to 10 mrem/yr to any member of the public. Dose due to radon-220, radon-222, and their respective decay products are excluded from these limits.

- c. At all times, the Permittee shall also, to the extent practicable, maintain and operate the plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- 3a. The Permittee shall demonstrate compliance with NESHAP using the procedures specified by 40 CFR 61.93
- b. The Permittee shall fulfill applicable notification, record keeping and reporting requirements for the NESHAP, 40 CFR 61.09, 61.10(c) and 61.94(c).
- 4. Emissions of volatile organic material (VOM) and operation of the open top vapor degreaser shall not exceed the following limits:

Solvent Usage		VOM Content (% Weight)	VOM Emissions	
(Ton/Mo)	(Ton/Yr)		(Ton/Mo)	(Ton/Yr)
0.8	8.0	100	0.8	8.0

These limits define the potential of VOM emissions and are based on maximum material usage and VOM content. Compliance with annual limits shall be determined from a running total of 12 months of data.

- 5a. Emissions and operation of equipment shall not exceed the following limits:

Item of Equipment	Operating Hours (Hours/Year)	E M I S S I O N S			
		Volatile Organic Material		Particulate Matter	
		(Lbs/Hr)	(Tons/Yr)	(Lbs/Hr)	(Tons/Yr)
Debonding Oven	1,664	1.77	0.88	0.55	0.46

These limits are based on 35 Ill. Adm. Code 212.321. VOM emission limits are based on stack test results as provided in permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. The afterburner shall maintain an operating temperature of not less than 1400 F and a control efficiency of not less than 99%.
- 6a. Emissions and operation of the three boilers shall not exceed the following limits:

Material	(mmscf/Mo)(mmscf/Yr)		Pollutant	Emission Factor (Lbs/mmscf)	Emissions	
					(Ton/Mo)	(Ton/Yr)
Natural Gas	40	400	NOx	100.0	2.0	20.0
			CO	84.0	1.7	16.8
			TSP	7.6	0.15	1.5
			VOM	5.5	0.11	1.1

These limits define the potential emissions of NOx, CO, TSP, and VOM and are based on maximum fuel usage and standard emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. Natural gas shall be the only fuel used in the 3 boilers. Use of any other fuel other than natural gas requires a permit change.

7. This permit is issued based on negligible emissions of VOM from the gasoline tank. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
8. Emissions and operation of the CDF Gas System and the Main Injector Particle Production Gas System shall not exceed the following limits:

VOM Usage		VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
0.27	3.21	0.27	3.21

9. This permit is issued based on the potential to emit (PTE) for Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP).
10. In the event that the operation of this emission unit results in an odor nuisance, the Permittee shall take appropriate and necessary action to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- 11a. The only fuel fired in the Emergency Engine-Generator shall be distillate fuel oil (No. 1 and 2 oil).
- b. The total annual consumption of fuel by the standby engine-generator shall not exceed 5,000 gallons/month and 60,000 gallons/year.
- c. At the above location, the Permittee shall not keep, store, or utilize:
- i. Distillate fuel oil (Grades No. 1 and 2) with a sulfur content greater than the larger of the following two values:
 - A. 0.28 weight percent, or
 - B. The wt. Percent given by the formula: Maximum wt. Percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.
- d. Emissions and operation of the engine-generator shall not exceed the following limits:

<u>Pollutant</u>	<u>Emission Factors</u> <u>(Lb/Hp*Hr)</u>	<u>Monthly Limits</u> <u>(Tons/Month)</u>	<u>Annual Limits</u> <u>(Tons/Year)</u>
NOx	0.024	1.11	13.32
CO	0.0055	0.25	3.05
SO ₂	0.0004	0.02	0.22
VOC	0.00071	0.03	0.39
PM	0.0007	0.03	0.39

These limits are based on standard AP-42 emission factors and information provided in the permit application, a maximum of 120 gallons per hour of fuel usage, a heat content of 137,000 Btu/gallon, and maximum operation of 500 hours per year for the engine-generator. Compliance with annual limits shall be determined from a running total of 12 months of data.

12. The Illinois EPA shall be allowed to sample all fuels stored at the above location.

13. The open top vapor degreaser shall be operated according to the following operating and equipment requirements of 35 Ill. Adm. Code 218.183:
- a. Operating Requirements: No person shall operate an open top vapor degreaser unless:
 - i. The cover of the degreaser is closed when workloads are not being processed through the degreaser;
 - ii. Solvent carry out emissions are minimized by:
 - A. Racking parts to allow complete drainage;
 - B. Moving parts in and out of the degreaser at less than 3.3 m/min (11 ft/min)
 - C. Holding the parts in the vapor zone until condensation ceases;
 - D. Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and
 - E. Allowing parts to dry within the degreaser until visually dry.
 - iii. Porous or absorbent materials, such as cloth, leather, wood or rope, are not degreased;
 - iv. Less than half of the degreaser's open top area is occupied with a workload;
 - v. The degreaser is not loaded to the point where the vapor level would drop more than 10 cm (4 in) when the workload is removed from the vapor zone;
 - vi. Spraying is done below the vapor level only;
 - vii. Solvent leaks are repaired immediately;
 - viii. Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;
 - ix. Water is not visually detectable in solvent exiting from the water separator; and
 - x. Exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area is not used, unless necessary to meet the requirements of the Occupational Safety and Health Act (29 U.S.C. Section 651 et seq.).
 - b. Equipment Requirements: No person shall operate an open top vapor degreaser unless:
 - i. The degreaser is equipped with a cover designed to open and close easily without disturbing the vapor zone;
 - ii. The degreaser is equipped with the following switches:
 - A. One which shuts off the sump heat if the amount of condenser coolant is not sufficient to maintain the design vapor level;
 - B. One which shuts off the spray pump if the vapor level drops more than

10 cm (4 in) below the bottom condenser coil; and

- C. One which shuts off the sump heat source when the vapor level exceeds the design level.
 - iii. A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser;
 - iv. The degreaser is equipped with one of the following devices:
 - A. A freeboard height of $\frac{3}{4}$ of the inside width of the degreaser tank or 91 cm (36 in), whichever is less; and if the degreaser opening is greater than 1 square meter (10.8 square feet), a powered or mechanically assisted cover; or
 - B. Any other equipment or system of equivalent emission control as approved by the Agency and further processed and consistent with Section 218.108 of this Part. Such equipment or system may include a refrigerated chiller, an enclosed design or a carbon adsorption system.
- 14a. The gasoline tank shall be equipped and operated with a submerged loading pipe, pursuant to 35 IAC 218.122 (b) and 218.583(a)(1).
- b. All tank vent pipes shall be equipped with pressure/vacuum relief valves with the following design specifications:
 - i. The pressure/vacuum relief valve shall be set to resist a pressure of at least 3.5 inches of water column and to resist a vacuum of no less than 6.0 inches of water column; or
 - ii. The pressure/vacuum relief valve shall meet the requirements of Section 218.586(c). [Condition 15]
15. The permittee shall implement the following with respect to the Stage I Vapor Balance System:
- a. Maintain and operate the system in accordance with the established procedures and instructions. [35 IAC 218 583 (d) (1)]
 - b. Maintain gauges, meters, or other specified testing devices in proper working order [35 IAC 218.583(d)(3)]
 - c. Operate the vapor balance system and delivery vessel unloading points in a manner that prevents:
 - i. A reading equal to or greater than 100 percent of the lower explosive limit (LEL measured as propane) when tested in accordance with the procedure described in EPA 450/2-78-051 Appendix B, and
 - ii. Avoidable leaks of liquid during the filling of storage tanks. [35 IAC 218.583 (d) (4)]
 - d. Repair, replace, or modify any worn out or malfunctioning component or element of design. [35 IAC 218.583 (c)(3)]
 - e. Within 15 business days after discover of the leak, repair and retest a vapor balance system which exceeds the above limits in Condition 14(c). [35 IAC 218.583(d)(5)]
 - f. Provide instructions to the personnel operating the gasoline dispensing facility describing necessary maintenance operations and procedures for prompt notification of the Permittee in case of any malfunction of a vapor balance system. [35 IAC 218.583(c)(2)]

16. The Permittee shall operate a Stage II vapor collection and control system which is properly installed and maintained as provided below, whenever vehicles are fueled with gasoline, pursuant to 35 IAC 218.586 (c):
 - a. The vapor collection and control system has been CARB certified.
 - b. The vapor collection and control system is maintained in accordance with the manufacturer's specifications and the certification.
 - c. No elements or components of a vapor collection and control system are modified, removed, replaced, or otherwise rendered inoperative in a manner which prevents the system from performing in accordance with its certification and design specifications.
 - d. The vapor collection and control system has no defective, malfunctioning, or missing components.
 - e. Personnel operating the gasoline dispensing facility are trained and instructed in the proper operation and maintenance of a vapor collection and control system.
 - f. Instructions are posted in a conspicuous and visible place within the motor fuel dispensing area and describe the proper method of dispensing motor vehicle fuel with the use of vapor collection and control system.
17. Personnel operating the gasoline dispensing facility shall operate in accordance with the Permittee's instructions and shall promptly notify responsible maintenance personnel or their supervisor of any scheduled maintenance or malfunction requiring replacement or repair of a major component of a vapor balance system. [35 IAC 218.583(d)(1) and (2)]
18. The Permittee shall only allow delivery vessels that display a current sticker showing that they are leak-tight to unload gasoline at the facility. [35 IAC 218.583(a)(2)(C)]
- 19a. The Permittee shall maintain monthly records of total gasoline throughput (gallons/month).
 - b. The Permittee shall keep an inspection, maintenance, and repair log for the gasoline dispensing facility that shall list activities performed that relate to the control of emissions, with date, description and responsible individual.
 - c. The Permittee shall maintain the following records with respect to the gasoline dispensing facility:
 - i. A copy of the registration information submitted to the Illinois EPA pursuant to 35 IAC 218.586(h).
 - ii. Records that clearly demonstrate:
 - A. That a certified Stage II vapor collection and control system has been installed and tested to verify its performance according to its specifications.
 - B. That proper maintenance has been conducted in accordance with the manufacturer's specifications and requirements.
 - C. The time period and duration of all malfunctions of the vapor collection and control system.
 - D. The motor vehicle fuel throughput of the operation for each calendar month of the previous year.

- E. That personnel operating the gasoline dispensing facility are trained and instructed in the proper operation and maintenance of the vapor collection and control system informed as to the potential penalties associated with the violation of provisions of 35 IAC 218.586.
20. The permittee shall maintain monthly records of the following items:
- a. The amount of natural gas burned in the three boilers (mmscf/mo and mmscf/yr);
 - b. Amount of solvent used in the vapor degreaser (ton/mo and ton/yr); and
 - c. Hours of operation of the debonding oven (hrs/mo and hrs/yr).
 - d. Material usage for the CDF System and the MIPP System (lbs/month and tons/year); and
 - e. Monthly and aggregate annual VOM and HAP emissions from the source with supporting calculations (tons/month and tons/year).
- 21a. The Permittee shall maintain records of the following items to address compliance with the limits in Condition 10:
- i. Records of the sulfur content of the fuel oil for each shipment of fuel oil received, percent by weight.
 - ii. Hours of operation for the engine-generator (hours/month and hours/year).
 - iii. Monthly and annual records of fuel consumption by the engine-generator (gallons/month and gallons/year).
 - iv. Monthly and aggregate annual emissions of NO_x, CO, SO₂, VOC, and PM in tons/month and tons/year of the engine-generator, with supporting calculations.
- b. The Permittee shall keep a maintenance and repair log for the engine-generator, listing significant activities performed with date.
- c. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
22. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
23. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

Telephone: 217/782-5811 Fax: 217/782-6348

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016
Telephone: 847/294-4000 Fax: 847/294-4018

24. Persons with lifetime operating permits must obtain a revised permit for any of the following changes at the source:
- a. An increase in emissions above the amount the emission unit or the source is permitted to emit;
 - b. A modification;
 - c. A change in operations that will result in the source's noncompliance with conditions in the existing permit; or
 - d. A change in ownership, company name, or address, so that the application or existing permit is no longer accurate.

It should be noted that this permit was revised to include the following: Collider Detector at Fermilab (CDF) Gas Circulating System and Main Injector Particle Production (MIPP) Experiment Gas System.

If you have any questions on this permit, please contact Dwayne Booker at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:DLB: psj
cc: Region 1

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P.O. BOX 19506
SPRINGFIELD, IL 62794-9506

STANDARD CONDITIONS
FOR
LIFETIME OPERATING PERMITS

July 1, 1998

The Illinois Environmental Protection Act [415 ILCS 5/39 (formerly Illinois Revised Statutes, Chapter 111-1/2, Section 1039)] grants the Illinois Environmental Protection Agency authority to impose conditions on permits which it issues.

1. The issuance of this Permit does not release the Permittee from compliance with state and federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois, or with applicable local laws, ordinances and regulations.
2. The Illinois EPA has issued this Permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for the revocation under 35 Ill. Adm. Code 201.166.
3.
 - a. The Permittee shall not authorize, cause, direct or allow any modification as defined in 35 Ill. Adm. Code 201.102, of equipment, operations or practices which are reflected in the permit application as submitted, until the appropriate permit is obtained from the Illinois EPA.
 - b. The Permittee shall obtain a new or revised permit under Section 39.5 of the Act, if the source no longer meets the applicability criteria of 35 Ill. Adm. Code 201.169 because of changes in emissions units or control equipment.
 - c. The Permittee shall obtain a revised permit prior to any of the following changes at the source:
 - i. An increase in emissions above the amount the emission unit or the source is permitted to emit; or
 - ii. A modification; or
 - iii. A change in operations that will result in the source's noncompliance with a condition in the existing permit; or
 - iv. A change in ownership, company name, or address, so that the application or existing permit is not longer accurate.
4.
 - a. This Permit only covers emission units and control equipment while physically present at the indicated source location. Unless the Permit specifically provides for equipment relocation, this Permit is void for an item of equipment on the day it is removed from the permitted location, or if all equipment is removed.

- b. The Permittee shall notify the Illinois EPA in writing to withdraw the Permit if all operations at the source have been permanently discontinued.
5. The Permittee shall allow any duly authorized agent of the Illinois EPA, upon the presentation of credentials, at reasonable times:
 - a. To enter the Permittee's property where actual or potential effluent, emission or noise units are or where any activity is to be conducted, pursuant to this Permit;
 - b. To have access to and to copy any records required to be kept under the terms and conditions of the Permit;
 - c. To inspect, including during any hours of operation of equipment constructed or operated under this Permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this Permit;
 - d. To obtain and remove samples of any discharge or emission of pollutants; and
 - e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring or recording any activity, discharge or emission authorized by this Permit.
6. The issuance of this Permit:
 - a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located;
 - b. Does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the source;
 - c. Does not take into consideration or attest to the structural stability of any unit or part of the project; and
 - d. In no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the equipment or source.
7. The Permittee shall maintain all equipment at the source covered under this Permit in such a manner that the performance of such equipment shall not cause a violation of the Environmental Protection Act or regulations promulgated thereunder.
8. The Permittee shall maintain a maintenance record on the premises for each item of air pollution control equipment. This record shall be made available to any agent of the Illinois EPA at any time during normal working hours and/or operating hours. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.
9. No person shall cause or allow startup of any emission unit or continued operation during malfunction or breakdown of any emission unit or related air pollution control equipment if such startup or continued operation would cause a violation of an applicable emission standard or permit limitation if such operation is not allowed as a special condition of this Permit, as required by 35 Ill. Adm. Code 201.149.
10. The Permittee shall submit an Annual Emission Report as required by 35 Ill. Adm. Code 201.302 and 35 Ill. Adm. Code Part 254.
11. The Permittee shall pay the annual site fee for the source in accordance with Section 9.5 of the Act.