



Department of Energy

Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

*cc: cover letter
to
Nancy Grossman
6/17/11*

JUN 16 2011

Dr. Nancy Grossman, Director
Environment, Safety & Health
Fermilab
P.O. Box 500
Batavia, IL 60510

Dear Dr. Grossman:

SUBJECT: U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA) MULTI-MEDIA
INSPECTION REPORT FOR THE FERMI NATIONAL ACCELERATOR
LABORATORY (FERMILAB), JUNE 2011

Reference: Letter with report, L. Roberts to M. Weis, dated June 7, 2011, Subject: Same as
Above, enclosed

I have enclosed for your records the USEPA multi-media inspection report from the subject inspection performed by representatives of the USEPA and the Illinois Environmental Protection Agency (IEPA) on March 28 and 29, 2011. The inspection evaluated Fermilab's compliance with the Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Underground Storage Tank (UST), and Polychlorinated Biphenyl (PCB), requirements and Fermilab's RCRA Part B Permit. The inspection report does not cite any violations of applicable regulations but does identify several recommendations/issues for improving our programs.

We would like to thank the many Fermilab staff that participated in the unannounced multi-media inspection, especially Katie Kosirog and Amber Kenney who coordinated the logistics for the inspection. If you have any questions, please contact Rick Hersemann, of my staff, at extension 4122.

Sincerely,

Michael J. Weis
Site Manager

Enclosure:
As Stated

cc: P. Oddone, w/o encl.
Y.-K. Kim, w/o encl.
B. Chrisman, w/o encl.
R. Ortgiesen, w/o encl.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
E-19J

June 7, 2011

Mr. Michael J. Weis
Fermi Site Office Manager
U.S. Department of Energy
P.O. Box 2000
Batavia, Illinois 60510

Dear Mr. Weis:

Enclosed please find a copy of the report for the multimedia compliance inspection that was performed at the U. S Department of Energy Fermilab facility in Batavia, Illinois by representatives of the U.S. Environmental Protection Agency and Illinois Environmental Protection Agency. As you may recall, the inspection was conducted on March 28 and 29 of 2011.

Should you have any questions regarding the report, please call me at (312) 886-0250.

Sincerely,

A handwritten signature in black ink, appearing to read "Lynne Roberts".

Lynne Roberts
Environmental Scientist
Federal Facilities Coordinator and Inspector

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

MULTIMEDIA INSPECTION REPORT

UNITED STATES DEPT OF ENERGY FERMILAB
KIRK ROAD & PINE STREET
BATAVIA, ILLINOIS

EPA Region 5 Inspection Team:

Valdis Aistars, Water Division
Jamie Paulin, Land and Chemicals Division
Arturo Cisneros, Land and Chemicals Division
Kevin Vuilleumier, Air and Radiation Division
Jim Clark, Illinois EPA, under agreement with EPA Region 5
Lynne Roberts, Office of Enforcement and Compliance Assurance

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EXECUTIVE SUMMARY

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Region 5 Enforcement and Compliance Assurance Team (ECAT) requested that a multimedia compliance inspection (MMI) be performed at the United States Department of Energy Fermilab (Fermilab) facility located in Batavia, Illinois. The facility is located near Kirk Road and Pine Street on 6,800 acres. Fermilab is a research and development facility.

Objective

The specific objectives of the MMI were to evaluate compliance with:

- Air pollution regulations under the Clean Air Act (CAA), including the Stratospheric Ozone Regulations, Illinois SIP requirements, and all CAA permits.
- Water pollution control regulations under the Clean Water Act (CWA), including an NPDES individual permit (IL0026123) for storm water discharges and several permits to construct and operate pretreatment systems (2009-EE-2646 and 2011-EE-0986).
- Hazardous waste management regulations under the Resource Conservation and Recovery Act (RCRA) and its corresponding permit.
- RCRA Subtitle I Underground Storage Tank (UST) regulations pertaining to its three underground storage tanks located at the facility.

Investigation Methods

The multimedia inspection at Fermilab included:

- Discussion of plant operations with the environmental staff of the facility;
- On-site examination of the facility's operations; and
- Reviewing and obtaining copies of selected facility documents/records.

Background

Fermilab is a research and development facility located in Batavia, Illinois. The facility is owned by the U.S. Department of Energy and co-operated by University Research Association Incorporated. It was founded in 1967 as the National Accelerator Laboratory and changed its name in 1974. Fermilab is engaged in conducting high-energy physics experiments, by colliding particles of matter to create new matter. These collisions take place in a Tevatron tunnel and fixed target experimental area. The Tevatron is the world's second-highest energy particle accelerator and collider. It is four miles in circumference and is sustained by 1000 superconducting magnets. The Tevatron consists of counter-rotating beams of protons and anti-protons, which produce collisions, allowing the basic building blocks of matter, and the forces acting on them, to be examined and studied. In addition, Fermilab also operates a two-mile long main injector particle accelerator.

Approximately 2000 employees work at Fermilab. Fermilab operates 24 hours per day and with 2 shifts. Fermilab is categorized under the North American Industry Classification System (NAICS) code 541712, "Research and Development in the Physical, Engineering, and Life Sciences."

Media-Specific Information

CAA:

Fermilab has a lifetime operating permit for its boilers, debonding oven, and various other small air sources. Fermilab owns refrigerant recovery equipment and operates several large chillers, subject to the Stratospheric Ozone Industrial Leak Rate regulations.

RCRA:

Fermilab operates as a large quantity generator of hazardous waste and currently has a RCRA Part B permit. The Part B permit allows Fermilab to store hazardous waste for up to one year. Fermilab stores its hazardous waste in Building WS-3, which is a designated hazardous waste storage area.

CWA:

Fermilab has an NPDES permit, which lists six stormwater outfalls. At the time of the inspection, Fermilab also had an active construction stormwater permit for its new Cryo module test facility. The facility operates pretreatment systems for its wastewater and discharges to either the Batavia wastewater treatment plant or the Naperville wastewater treatment plant.

RCRA- UST:

There are three underground storage tanks regulated by RCRA at the Fermilab facility. All three tanks are located at Site 38, the Fuel Service Center. The tanks are a 12,000-gallon gasoline tank, a 6,000-gallon diesel tank, and a 6,000 E-85 tank. All tanks and piping are constructed of double-wall fiberglass-reinforced plastic.

TSCA:

Fermilab stores its old PCB waste at Site 55. It currently uses fluorescent ballasts and has a small filter capacitor, which contain PCBs. All other PCB-containing equipment has been removed.

APPENDIX A



Figure 1 – Fermilab Location

Kirk Road and Pine Street

Batavia, Illinois

APPENDIX B

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

SUBJECT: Compliance Inspection Report - Air Division

FACILITY: United States Department of Energy
Fermi National Accelerator Laboratory
Kirk Road and Pine Street
P.O. Box 500, MS 119
Batavia, Illinois 60510-5011

INSPECTION

DATE(S): March 28-29, 2011

**FINAL
REPORT**

DATE: April 12, 2011

FROM: Kevin Vuilleumier, Environmental Engineer
Air Enforcement and Compliance Assurance Branch (MN/OH)

TO: Files

THROUGH: William MacDowell, Section Chief
Air Enforcement and Compliance Assurance Branch (MN/OH)

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SECTION 1: SUMMARY AND BACKGROUND

1.1 Inspection Summary

The U.S. Environmental Protection Agency, Region 5 conducted an unannounced multimedia inspection at the U.S. Department of Energy's Fermi National Accelerator Laboratory (Fermilab) located in Batavia, Illinois. This was a partial-compliance inspection for the Air Division. This report covers the Clean Air Act (CAA) portion of the multimedia inspection.

Date(s) of Inspection:

March 28-29, 2011

Purpose of inspection:

- 1) Identify and inspect air emission sources at Fermilab.
- 2) Develop a better understanding of the processes and control equipment at Fermilab.
- 3) Investigate the applicability of and compliance with certain regulatory requirements including: Standards of Performance for New Sources and portions of the federally approved Illinois State Implementation Plan (Illinois SIP).

Inspection Participants:

Rick Hersemann, Physical Scientist – U.S. Department of Energy

Katie Kosirog, Environmental Protection – Fermilab

Amber Larson, Environmental Protection - Fermilab

Lynne Roberts, Environmental Scientist – EPA, OECA

Kevin Vuilleumier, Environmental Engineer – EPA, ARD

Jamie Paulin – EPA, RCRA

Valdis Aistars – EPA, WD

Arturo Cisneros – EPA, UST

Jim Clark – Illinois Environmental Protection agency

Confidential Business Information:

Fermilab did not claim any information as confidential business information.

1.2 Facility Background

Fermilab is a U.S. Department of Energy owned laboratory used for high energy physics, particle physics and astrophysics research. It is situated on about 6,800 acres (covering about ten square miles) on which approximately 360 buildings are located. It also has a small village area where some scientists who conduct research over a longer period of time can rent housing.

Fermilab has approximately 2,000 employees and is classified with a North American Industry Classification System (NAICS) code of 541717, "Research and Development in the Physical, Engineering and Life Sciences." Fermilab typically operates on a single shift, although the multiple research and support operations may vary in operational hours and/or shifts. Fermilab receives/ships material by bulk truck and rail.

SECTION 2: INSPECTION DETAILS

2.1. Pollutants of Concern

The primary pollutants of concern from Fermilab include particulate matter (PM) and ozone-depleting substances (CFC and HCFC). Other pollutants of concern include: volatile organic compounds (VOC), volatile organic matter (VOM), nitrogen oxides (NO_x), sulfur oxides (SO_x), carbon monoxide (CO), polystyrene, and hazardous air pollutants (HAP)-including radionuclides and hydrogen fluoride.

2.2. Arrival and Opening Conference

Day 1:

EPA representatives arrived at Fermilab on March 28, 2011 at approximately 8:30 AM. We arrived at Fermilab's security check point, showed our credentials, and explained the purpose of our visit. We were directed by security checkpoint personnel to Wilson Hall. We met with an international staff assistant who told us to go to the seventh floor Environmental Health and Safety Division (EH&S). We were greeted by the front desk staff who called Katie Kosirog of Fermilab. We showed Ms. Kosirog our credentials and she led us to a conference room. We explained the purpose of our visit and Ms. Kosirog began making calls to get the appropriate people together for the meeting/inspection. Shortly after our arrival, we were joined by Rick Hersemann from the U.S. Department of Energy and Amber Larson from Fermilab. Ms. Kosirog, Mr. Hersemann and Ms. Larson were our primary contacts who accompanied us throughout the two days of inspection.

EPA representatives asked for a general overview of the history, processes, and operations at Fermilab. EPA also asked for a plant tour and copies of certain documents (permits, site map and process flows) which would help EPA during the tour. Mr. Hersemann provided an overview of the facility from an aerial map in the conference room along with an explanation of the processes and operations at Fermilab. We then proceeded to the fifteenth floor which provided a good vantage point to go through the processes (in particular the accelerators) in a little more detail. The inspection team decided to stay together the first day of the inspection and plant tour. The first day inspection team included: Lynne Roberts, Kevin Vuilleumier, Jamie Paulin, and Valdis Aistars.

Day 2:

EPA representatives arrived at Fermilab on March 29, 2011 at approximately 8:00 AM. We met Fermilab representatives around 8:30 AM on the seventh floor to go over our plan for the day. It was decided that we would stay together for most of the morning site tours, but then split up for records review or media specific tours. The second day inspection team for EPA included: Lynne Roberts, Kevin Vuilleumier, Jamie Paulin, Valdis Aistars, Arturo Cisneros, and Jim Clark (from Illinois Environmental Protection Agency). Mr. Clark conducted the Toxics Substances Control Act (TSCA) inspection on behalf of EPA.

2.3. Process Description

Fermilab is a high energy physics laboratory and research facility. It operates a high energy particle accelerator where protons and anti-protons are sped up to 99.999954 percent the speed of light and then collided to produce other particles/energy. The main particle accelerator is called the Tevatron. The Tevatron is a circular particle collider with a diameter of approximately four-miles.

Fermilab also operates three “fixed target line” accelerators which are linear colliders used in meson, neutrino and proton research. The meson line is currently the only “fixed target line” running. Fermilab is constructing a new muon line building which will also be a fixed target line.

Fermilab also operates a wide variety of other processes which provide support for the accelerators and on-going research. These processes are discussed in more detail below.

Particle Accelerators

The particle accelerator processes can be broken down into three main areas: the particle generators, main injector, and colliders. The generation of negatively charged hydrogen ions is the first step necessary to produce the particles used by Fermilab.

Particle Generators: Fermilab creates negatively charged hydrogen ions using an ion generator of Cockroft-Walton design. These ions are accelerated through a 500 foot long linear accelerator (Lineac) to approximately 70 percent the speed of light. The ions then enter the first circular accelerator called the booster. Upon entry, the ions pass through a carbon foil which removes electrons from the hydrogen ions, creating positively charged protons. These protons enter the next acceleration stage which is called the booster.

The booster is a circular accelerator which uses magnets to bend the beams of protons into a circular path. The positively charged protons are accelerated around the booster approximately 20,000 times before being sent to the main injector. Acceleration within the booster occurs through the use of an electric field in a radio-frequency cavity.

The main injector is another circular accelerator which serves several purposes. Proton beams are pulled off the main injector and directed to a nickel target to produce antiprotons (among many other particles). Once antiprotons are formed, they are captured, focused and then injected into a storage ring. The antiprotons are accumulated and cooled within the storage ring before being injected back into the main injector “recycler”. The antiprotons are further cooled and accumulated within the recycler before being injected into the Tevatron.

Main Injector: The main injector was completed in 1999 and is now the central ring of Fermilab’s accelerator complex. It has three primary functions: 1) Accelerates protons and antiprotons prior to injection into the Tevatron; 2) Delivers protons to the nickel target to produce antiprotons, as discussed above; and 3) It transfers antiprotons between the antiproton storage ring and the recycler (another storage ring within the main injector). Protons and antiprotons are accumulated within the main injector as they travel in opposite directions (one clockwise the other counterclockwise).

Tevatron: The Tevatron is the primary collider within the Fermilab accelerator complex. It receives protons and antiprotons from the main injector and accelerates each in opposite directions. Acceleration occurs through the use of more than 1,000 superconducting electromagnets operating at negative 450° F. The low temperature allows large amounts of electric current to flow through the cable inside the magnets without resistance. The protons and antiprotons are accelerated to speeds of 99.999954 percent the speed of light around the Tevatron and then collided into each other within one of two detectors, the collider detector at Fermilab (CDF) or the DZERO (named from its location on the Tevatron collider, D0). Protons are also pulled from the Tevatron and directed into the “fixed target area” linear colliders discussed above.

Central Utility Building:

The central utility building is a support operation for Fermilab. It provides hot water used for comfort heating, showers, sinks, etc. Hot water is produced through the use of natural gas-fired boilers. Fermilab currently operates two natural gas-fired boilers. The older boiler has a heat input of 13.39 million British Thermal Units per hour (MMBtu/hr) and was installed in 1970. It used to be capable of burning fuel oil but has since been modified to only burn natural gas. This older boiler was being completely refurbished at the time of this inspection, including retubing due to leaks. Recent testing (November, 2011) shows the boiler operated at about 87 percent efficiency at varying loads. There are no pollution controls on the older boiler.

The second boiler is a new Cleaver-Brooks high-efficiency boiler with flue-gas recirculation. It has a heat input of 12.247 MMBtu/hr and was installed in 2010. This high-efficiency boiler replaced two older boilers which have been completely removed from the facility.

The central utility building also houses five chillers. The chillers use either HCFC-123 or R-123 for refrigerant. Two chillers are used for comfort cooling and the remaining three chillers are used for process cooling.

Industrial Building Four:

Industrial building four is responsible for, among other things, making the superconducting cavities. The cavities themselves are received pre-manufactured, however, the inside of the cavities are buffed and polished in this building to remove imperfections within the cavity. The cavities are made of niobium.

CDF Building:

The CDF building houses one of the two detectors along the Tevatron collider ring. The facility produces, among other things, a blend of ethane, argonne and isopropyl alcohol which is used as atmosphere around the actual detector. The isopropyl alcohol also acts as a cleaning agent for the detector chamber.

Vehicle Maintenance Building:

The vehicle maintenance building includes gas dispensing operations as well as vehicle repair work. There is no body work performed at the building although some vehicle air conditioning work (including refilling with coolant) does occur. Gas dispensing operations include: unleaded gasoline, diesel, E-85 and natural gas.

Extruder Building:

The extruder building is located in the village technical area and identified as Lab 5: plastic scintillator. It manufactures thin rectangular bars of polystyrene material with holes down the length of the bars. The material is used in the detectors and the holes house fiber optics used for particle detection. The bars of polystyrene are coated on the outside with a thin titanium dioxide material which helps retain reflectivity within the polystyrene material.

Magnet Debonding Oven:

This oven is an electric oven located in an area just outside of industrial building two. It is used to remove cured epoxies from magnet components. It is equipped with an afterburner which should help control volatile organic compound emissions.

L&L Furnaces:

Two L&L furnaces are located in industrial building three. At least one of the furnaces is used each month. Each furnace reacts superconducting niobium tin (Nb_3Sn) coils. The furnace operates under an argon blanket to avoid carbon buildup. During the reaction process, palmitic acid (in an Argonne blanket) is vaporized and passes through a palmitic acid trap. The trap is located exterior to the furnace.

Sand/Grit Blast Booths:

Femilab has multiple small sand/grit blasting booths spread throughout the facility. These units are small booths used to clean small parts for mechanical support, proton source support and cryogenic systems support. Each unit is self contained and vented inside the building housing it. Most have a high-efficiency filter and/or a cyclone to control PM emissions.

2.4. Facility Tour

The facility tours were led by Katie Kosirog, Rick Hersemann and Amber Larson during day one and day two. We began our tour on the fifteenth floor which provided a good vantage point from which we could get an overview of the facility. Ms. Kosirog and Ms. Larson walked us through the general accelerator processes and how they worked. They also pointed out several buildings we will be visiting during the inspection and cooling towers for the central utility building.

Day 1:

We left the fifteenth floor and headed to the central utility building (CUB). The CUB houses two boilers, five chillers and a series of cooling towers which provide support services to Fermilab.

We met Chip Key and Tom Krause upon entry and they walked us through the CUB. Mr. Key and Mr. Krause described the boilers and told us that Fermilab originally had three boilers. Two have since been removed and replaced with the newest Cleaver-Brooks boiler. The remaining old Continental boiler was being refurbished, including a full re-tubing, because of leaks. Mr. Key and Mr. Krause noted that the Continental boiler is strictly used as backup to the newer, high-efficiency Cleaver-Brooks boiler. We walked through the plant and verified the Continental boiler was indeed dismantled and lacked any tubing. Mr. Vuilleumier asked if there had been any emissions testing conducted on either of the remaining boilers. He was told that indeed annual emission testing is conducted, however, upon further review, it was found the testing was not typical emissions testing (i.e. for NO_x, SO₂, etc.) but rather general performance testing which included CO₂ and O₂ measurements to help determine the boilers efficiency and overall operation.

We proceeded to the five chillers which are located in the same building as the boilers. Three of the chillers (#2, #3 and #4) are used for process cooling. Unit #2 and #4 are each 1400 ton units which use HCFC-123 as the refrigerant. Unit #3 is an 800 ton unit which uses R-123 as the refrigerant. Unit #3 is specifically used for cooling the Lineac process. The remaining two chillers (#1 and #5) are used for comfort cooling. Each of these units are 800 ton units used which use HCFC-123 as the refrigerant.

The cooling towers at CUB handle only recirculated, non-contact cooling water. Operators treat the cooling tower water with biocides and chlorine, but no chromium compounds. We left the CUB and proceeded to industrial building four.

We met Bridget Soereny who led the tour of industrial building four. Industrial building four houses the integrated cavity processing center (ICPC). The ICPC is used to process superconducting cavities prior to use within the accelerator. Processing entails cleaning and polishing the interior of each superconducting cavity to the texture of a polished, metal mirror. The ICPC has two polishing processes; a chemical process and a mechanical process.

The mechanical process is the common practice used in the industry. It uses various media, with different sizes, shapes and textures, to remove imperfections and polish the inside of the superconducting cavity through a series of stages. We were shown a small plastic container during the tour which had nearly a dozen different media in different shapes which are used during certain steps within the mechanical processes. The media is placed within the cavity. The cavity is then placed and securely locked inside an enclosed tumbler. The tumbler rotates in one direction while the piece to which the cavity is attached rotates in the other direction. The speed of the rotation is what enables the media to tumble and polish the inside of the cavity.

The chemical process is a new process which has yet to operate. It is believed this process may begin operation in June, 2011. It is based on several years of research and uses water and acid to clean and polish the inside of the superconducting cavities. The process is contained within a large cabinet which is maintained under negative pressure during operation. Water and acid is circulated through the superconducting cavity several times until the polishing is completed. Spent acid is sent to a small drum located behind the polishing cabinet where it is held inside a larger drum. The process uses a blend of nine-parts sulfuric acid/one-part hydrofluoric acid for the acid stages. The chemical process has an over-designed, two-stage scrubbing system to remove acid from the vent gases. The first stage uses sodium hydrosulfide as the scrubbing media. This forms hydrogen sulfide which then enters the second stage. The second stage uses sodium hydroxide as the scrubbing media to remove hydrogen sulfide from the vent stream.

The inspection team next visited the CDF building. We met Del Allspach (operations engineer) who walked us through this building. The primary purpose of this building is to house the collider and maintain an appropriate atmosphere around the detector. The atmosphere consists of an argonne/ethane mixture of gas combined with a small amount of isopropyl alcohol. We did not enter or visit the actual detector area located within this building (called collision hall) but did tour the rest of the building. The CDF building has two liquid nitrogen tanks (used for cooling) located outside of the CDF building and a liquid helium tank located inside the CDF building (also used for cooling). The liquid nitrogen tanks are approximately 13,000 gallons and 7,000 gallons. The specific size of the liquid helium tank was not identified during the inspection.

Isopropyl alcohol is received in 200 liter containers. One container is always online and stored in a shed outside of the CDF building. The shed is equipped with an alcohol detector and will force a shutdown if leaks are detected. This 200 liter container in the shed is used to batch fill another container located within the building. Argonne and ethane are blended together in a gaseous form. This blended gas is stored, until needed. The argonne/ethane gas blend is bubbled through the isopropyl alcohol stored within the main building and carried to the ceiling/chamber of collision hall. This chamber feeds the detector providing a consistent atmosphere around the collider. The isopropyl alcohol acts as a cleaning agent within the detector chamber.

The argonne/ethane/isopropyl mixture is then vented to the ambient air through a stack in the back of the building. The stack is a horizontal stack which vents emissions into a restricted area (fenced off due to potential radiation). Emissions of volatile organic matter are determined based on how much isopropyl alcohol goes into the system. The CDF building has a meter which identifies how much isopropyl alcohol is in the 200 liter container and how much is fed to the holding container inside the building.

The next stop for the first day of the inspection was a hazardous waste storage building identified as Site 55. The site held a small amount of waste which included carbon absorption media from the helium system, one bag of asbestos containing tiles and several containers of lead-acid batteries. Mr. Vuilleumier asked where the asbestos tiles came from and was told they most likely came from the village on-site. The village contains many older homes which can be rented out by researchers involved in longer-term research projects at Fermilab. The lead-acid batteries come from a variety of locations. Mr. Vuilleumier asked who handles the lead-acid batteries and was told Fermilab works with TRS trading who sends the batteries to a smelter in Alabama. The last stop for the first day of the inspection was the ILC collider research facility. This facility is currently under construction.

Day 2:

We reconvened with Katie Kosirog, Rick Hersemann and Amber Larson on the seventh floor of the Wilson building for the second day of the inspection. The first stop of this day's tour began at the vehicle maintenance building.

The vehicle maintenance building is a support facility which takes care of property vehicles including: fire engines, cars, maintenance vehicles and others. It is also responsible for maintaining and operating the fuel dispensing facility. This building has several underground storage tanks and maintains stage II vapor recovery equipment on all its fuel dispensers. The building is not involved with any repainting/touch-up operations related to vehicles but does operate a safety-clean parts washer. The parts washer uses mineral spirits as its cleaning media. Used oil is held in 30-gallon drums.

The facility also handles refrigerant related to vehicle maintenance and has three certified technicians. It purchased a new system for CFC activities about a year ago, but has not yet certified it with EPA. The new system is capable of handling only 134A refrigerant. The old system could handle both R-12 and 134A refrigerant.

CFC records are actually maintained at a separate Fermilab building. Pat Marsh is in charge of all CFC records. She was not available on either day of our inspection. Mr. Vuilleumier visited the building where all CFC records and activities are coordinated and met with Mr. Kevin Anderson. Mr. Anderson briefly discussed the CFC program, but had only limited access to certain records related to CFC. He was not able to pull any CFC service records, but did provide a list of CFC units. Mr. Anderson explained the chillers in the CUB building are filled/maintained through a contract with Trane. The Trane contractor manager is Greg Gilbert. Service records for the chillers in the CUB are provided to Pat Marsh.

Mr. Vuilleumier and Amber Larson then visited the extruder building located in the village technical area. We met Anna Plung who walked us through the process. The extruder process is used to make plastic scintillator material for detectors, as discussed above. The process is usually run once a week for one shift. The process was not running at the time of our inspection, although a run was planned for later in the afternoon.

Polystyrene is received from Dow Chemicals in small beads. These beads are loaded into a feed bin for the extrusion system. The feed bin is dried under a nitrogen gas blanket to reduce moisture in the material. Polystyrene is then mixed with a fluorescent material and immediately fed to the extruder. The fluorescent material is added to increase reflectivity within the plastic scintillator material to allow better detection of particles and energy during particle collisions. There is an elephant-trunk type duct at the outlet of the extruder which captures emissions (mainly polystyrene emissions) and vents them to the atmosphere. There are no controls on this vent system. Once the extruded material exits the extruder, it is coated with a thin coating of titanium dioxide. The titanium dioxide coating further increases the reflectivity within the scintillator material. It also helps prevent external light from entering the scintillator material. The titanium dioxide coated scintillator material is cooled by direct contact water in two stages. The first uses a water bath, the second uses a water spray tank. The puller (which keeps the extruded material moving through the entire system), is located after the coolers. The final stage of this process is the shearing process. The plastic scintillator material is sheared to different lengths depending on its ultimate end-use.

Mr. Vuilleumier and Ms. Larson then visited the magnet debonding oven outside of industrial building two. The oven is an electric oven used to remove epoxy from coils/magnets. It has a 0.9 MMBtu/hr afterburner which operates around 1400° F. The oven has not been in full operation for approximately two years, according to operators. When it is operated, the maximum burn typically lasts 16 hours. The oven burns epoxy off electromagnetic coils manufactured in the L&L furnace area. Several epoxies are used and material safety data sheets were requested by Mr. Vuilleumier.

Operators usually do monthly testing on the magnet debonding oven to assure continued capability to operate. The monthly test usually lasts about four hours and brings the oven up to about 400° F.

The next stop was industrial building three to inspect the L&L furnaces. These furnaces are used to produce a superconducting material called Niobium 310. The superconducting material is mainly 37 strands of wire wound together in a thin, flat rectangular strand. The wires are wrapped with an insulation (E-glass) and wound into a tight coil. The coil is placed inside a stainless steel mold. The mold (with the superconducting material) is placed in one of two L&L furnaces. The mold and material are heated in three stages under an argonne atmosphere. Each stage involves a set oven temperature for a set amount of time at each temperature (200° F, 400° F then 600° F). After the third heating stage, the material is cooled as the ovens come down in temperature. The material is then removed from the oven and cooled naturally. The ovens are enclosed systems which are not vented to the atmosphere until depressurization occurs.

Mr. Vuilleumier was re-joined by Lynne Roberts and Jamie Paulin to tour three grit blasters. This was the final tour stop for Air.

The grit blasters are small, self contained units which capture and collect any blasting material internally. All of the blasters we saw vent inside the building after passing through unit contained cyclones and/or filters. One of the grit blasting units waste material is handled as low

level radioactive waste. This waste is mainly derived from blasting certain parts which were inside the colliders and/or detectors where it possibly came in contact with some radioactivity.

One radionuclide monitor was visited by part of the inspection team. The team did not leave the vehicle but did want to visit a site. The inspection team decided, prior to the inspection, not to conduct the radionuclide portion of the inspection at this time. A separate inspection for radionuclide compliance is scheduled for a future date.

2.5. Record Review/Documents Provided

EPA asked for certain information during the inspection. The information was sought to help EPA better understand the processes and operations prior to walking through the plant. The following is a summary of documents/information provided.

- 1) Lifetime operating permit
- 2) Site maps (with building labels)
- 3) Building fire protection plan (for buildings visited)
- 4) Pictures of radionuclide monitors
- 5) Process flow diagrams (where appropriate)
- 6) Gas distribution totals occurring at the vehicle maintenance building for 2010
- 7) Boiler testing data
- 8) List of refrigerant appliances on site
- 9) Central utility building permit-application for new boiler
- 10) Updated list of all air sources/stacks on site
- 11) Magnet debonding oven procedures
- 12) Annual reports on refrigerant use
- 13) Material safety data sheets for epoxy material burned in magnet debonding oven

Additional material was requested but not immediately provided. It will be provided within a few weeks of the inspection.

- 1) Boiler specifications (including control technology)
- 2) Design specifications for scrubber on chemical polishing process
- 3) CFC/HCFC appliance service records for past two to three years
- 4) CFC/HCFC appliance service records for those chillers handled by Trane through a contract

2.6. Close-out Meeting

The inspection team was joined by several additional people for the close-out meeting (held Tuesday, March 29, 2011, at 3:30 P.M.). Attendees included:

Dr. Pier Oddone, Director	Fermilab
Dr. Young-Kee Kim, Associate Director	Fermilab
Dr. Bruce Chrisman, Chief Operating Officer	Fermilab
Mark Bollinger, Associate Site Manager for DOE	Fermilab
Martha Michaels, Deputy Director of ES&H Section	Fermilab

The inspection team thanked Fermilab and all who were involved with the inspection for their assistance and cooperation. It was decided the final report will be sent to Michael Weis, Site Officer Manager for Fermilab. The inspection team provided a summary of the facilities visited

and documents requested. The team also provided a brief summary of any immediate findings to the Fermilab attendees. Mr. Vuilleumier only raised two minor issues that would need follow-up. First, he said we needed the heat input for the afterburner on the magnet debonding oven. The reason for this is to evaluate applicability (or non-applicability) of the Standards of Performance for Small, Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subpart Dc) and/or Standards of Performance for Stationary Gas Turbines (40 CFR Part 60, Subpart GG). He added he did not believe either would apply, but wanted to check to make sure. Mr. Vuilleumier also reminded Fermilab that it should certify the new refrigerant machine as soon as possible. Ms. Roberts said the certification document is a one-page document which can be accessed online. Lastly, Mr. Vuilleumier reminded Fermilab that it requested the service records for all CFC/HCFC units for the past two to three years. He said EPA will be reviewing the records and, if necessary, will run calculations to evaluate the leak rates of CFC/HCFC units.

APPENDIX C



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BOULEVARD
CHICAGO, IL 60604

COMPLIANCE EVALUATION INSPECTION REPORT
AMENDED¹

INSTALLATION NAME: United States Department of Energy Fermilab

EPA ID No.: IL6 890 030 046

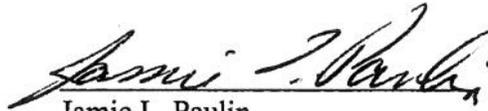
LOCATION ADDRESS: Kirk Road and Pine Street
Batavia, Illinois 60510

NAICS CODE(S): 54171 [Research and Development in the physical,
engineering, and life sciences.]

DATE OF INSPECTION: March 28, 2011 and March 29, 2011

EPA INSPECTOR: Jamie L. Paulin
Chemist
LR-8J
Compliance Section 1
(312) 886-1771 Direct
(312) 353-4788 Facsimile
paulin.jamie@epa.gov

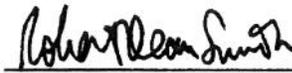
PREPARED BY:



Jamie L. Paulin
Chemist

5/23/11
Date

REVIEWED BY:


hr Lorna M. Jereza, Chief
Compliance Section 1
RCRA Branch

5/23/11
Date

¹United States Department of Energy Fermilab Compliance Evaluation Report, dated 5/6/2011, was amended to correct typographical errors.

INTRODUCTION:

The purpose of the inspection was to conduct an un-announced Multi-Media Inspection (MMI) at the United States Department of Energy Fermilab (Fermilab), located at Kirk Road and Pine Street, Batavia, Illinois, to examine Fermilab's management of its Resource Conservation and Recovery Act (RCRA) regulated waste, by the U.S. Environmental Protection Agency. Fermilab is owned by the United States Department of Energy (DOE) and co-operated by University Research Association Incorporation. As a federal facility, Fermilab is required to be inspected by the EPA on an annual basis, in accordance with Section 3007 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., as amended, § 6927.

Fermilab is a high energy physics research facility and engages in the research of acceleration and collision of subatomic particles. Located west of Chicago, Fermilab occupies approximately 6800 acres. Fermilab operates the Tevatron, the world's second-highest energy particle accelerator and collider. The Tevatron is four miles in circumference and is sustained by 1000 superconducting magnets. The Tevatron consists of counter-rotating beams of protons and anti-protons, which produce collisions, allowing the basic building blocks of matter, and the forces acting on them, to be examined and studied. In addition, Fermilab also operates a two-mile long main injector particle accelerator. Approximately 2000 employees work at Fermilab. Fermilab operates 24 hours per day and with 2 shifts. The Tevatron never ceases operation.

Fermilab operates under a RCRA Part B permit issued by the Illinois Environmental Protection Agency (IEPA). Fermilab initially notified EPA of its hazardous waste activity on or about October 20, 1980, and submitted its RCRA Part A permit application on or about November 7, 1980. The IEPA issued Fermilab a hazardous waste storage permit on September 23, 1991. The permit became effective on October 28, 1991. The hazardous waste storage permit was amended on November 15, 1993, and December 18, 1996. The permit expired on November 28, 2001. Fermilab submitted its permit renewal application to the IEPA on April 24, 2001. The IEPA reissued the hazardous waste storage permit, and it was made effective on June 30, 2006. The permit will expire on June 30, 2016.

Fermilab's Part B permit allows for the storage of hazardous waste for up to one (1) year in Building WS-3, which is designated as the Hazardous Waste Storage Facility (HWSF). The HWSF is situated in a three-building complex referred to as Site 55. Building WS-3 stores both hazardous waste and mixed radioactive/PCB wastes. Site 55 is situated in the south-central portion of the Fermilab campus, approximately one-tenth mile northwest of the intersection of Eola Road and Road E. The site is surrounded by a six-foot tall chain link security fence. A 16-foot gate is located along the eastern fence line, and the gate is kept locked. Site 55 consists of the Building WS-3, as well as, Building WS-1 and Building WS-2, each of which stores non-hazardous waste and temporarily stores (for 90 days or less) hazardous waste. A fourth structure, WS-4, which was used to store flammables, underwent closure approximately ten (10) years ago, in accordance with the IEPA's closure requirements. The open (paved) area between the buildings may sometimes be used to store containers of waste. Fermilab does not currently manage or store hazardous waste in tanks, on drip pads or in surface impoundments.

Fermilab also operates as a large quantity generator (LQG) of hazardous waste. Wastes are generated at various sites across Fermilab's campus. Waste is generated from research projects, the maintenance of equipment that supports Fermilab's particle accelerators and other projects, and occasional remediation activities. Hazardous wastes generated, in the different areas, are managed in satellite accumulation areas (SAAs). The individual generators, via assigned Waste Coordinators, coordinate with the Environmental Safety & Health (ESH) Section for waste "pick-ups". ESH personnel are contacted by the generator by phone or email to arrange for pick-ups using a specific ESH waste pick-up request form. The pick-ups occur the 1st and 3rd Wednesday of every month.

Waste codes generated at Fermilab include: D001, D002, D008, D009, D035, D040, P042, P105, P106, P119, and U151. Waste streams include spent solvents, metal-bearing (e.g., lead, mercury) characteristic wastes and mixed radioactive/PCB wastes.

Lastly, Fermilab is categorized under the North American Industry Classification System (NAICS) code 541712, "Research and Development in the Physical, Engineering, and Life Sciences."

OPENING CONFERENCE:

The MMI team arrived at Fermilab at or around 8:55 am on March 28, 2011, and entered the Wilson Building (Wilson Hall). Ms. Katie Kosirog, ESH Specialist, greeted us and organized the opening conference with appropriate Fermilab personnel, which took place in a specified conference room. The personnel that were in attendance at the opening conference are listed in *Table 1*.

During the opening conference, we presented our credentials to all personnel in attendance and explained the purpose of our visit.

Various topics were discussed, at the opening conference, as listed below:

- A new construction ring (Meson Neutrino Proton [MNP] Project), located under-ground, shoots beams of neutrinos to Minnesota, where the beams are being detected.
- Fermilab has six (6) NPDES Outfalls.
- Hazardous waste, non-hazardous waste, mixed radioactive waste, and PCBs are stored, and located, at Site 55.
- Low level radioactive waste is stored, and located, at Site 40 for proper disposal.
- Used oil is stored, and located, at the Vehicle Maintenance Facility.
- A Safety-Kleen parts washer is located at the Vehicle Maintenance Facility.
- Fermilab does have a waste water treatment system.
- Recycled water is continually used to cool the rings and magnets.
- Fermilab consists of over 300 buildings on site.
- No tanks are used for hazardous waste storage.

Table 1. Personnel in Attendance during CEI at Fermilab.

Personnel	Title	Department
Rick Hersemann	Physical Scientist	Department of Energy
Amber Larsen	ESH Specialist	Fermilab
Katie Kosirog	ESH Specialist	Fermilab
Lynne Roberts	Federal Facilities Coordinator	Office of Enforcement and Compliance Assurance
Valdis Aistars	Environmental Engineer	Water Division
Kevin Vuilleumier	Environmental Engineer	Air and Radiation Division
Jim Clark	TSCA Inspector	Illinois Environmental Protection Agency
Jamie Paulin	Chemist	RCRA Branch in Land and Chemicals Division

SITE INSPECTION (MARCH 28, 2011):

We began the physical site inspection on the 15th floor of the Wilson Building, where we were able to see various locations on the Fermilab campus from the viewing windows, including the Tevatron ring. Ms. Amber Larsen, ESH Specialist, explained that the Tevatron will no longer be used and will be de-commissioned in October of 2011. She expressed that proper procedures will be used for de-commissioning. Ms. Larsen also discussed the many experiments that Fermilab was conducting, at the time of the inspection, including the process of shooting beams to Minnesota for detection, 8000 feet below the surface.

From the Wilson Building, we traveled, via Fermilab vehicles, to the Central Utilities Building (CUB).

While we waited to enter the CUB, I spoke with Mr. Dave Hockin, ESH Hazard Control Technology Team, and Mr. Billy Arnold, ESH Hazard Control Technology Team Supervisor. Mr. Arnold explained to me that Fermilab uses a waste "pick-up" request form. Each Waste Coordinator from the various Fermilab waste generators, including SAAs, completes the form and contacts Mr. Arnold's office to coordinate a "pick-up." The ESH Hazard Control Technology Team usually makes campus waste "pick-ups" on the 1st and 3rd Wednesdays of

every month. According to Mr. Arnold, the Hazard Control Technology Team uses a van to pick up waste in containers of 5 gallons or less in volume. If the volume of the waste containers is 55 gallons or greater, then a contractor is used to transport the containers to the appropriate storage facility, Site 55 or Site 40.

Mr. Arnold further stated that each Waste Coordinator is responsible for the training of their division section employees. The training would include any appropriate RCRA training. Lastly, Mr. Arnold verified that the RCRA paperwork and records were stored at Site 40.

We then entered the CUB to inspect the boilers and waste water treatment unit (WWTU). The boilers were being operated inside of this building. Mr. Rod Walten, Facilities and Engineering, gave us a review of the boilers and monitoring systems of the boilers.

In addition, Mr. Walten explained that the treated water from the WWTU was being discharged into the city sewer system in batches of 3000 gallons. The filter press sludge from the WWTU was being collected in yellow containers and labeled as radioactive. The containers of low-level radioactive filter press sludge were being stored inside of this building, near the WWTU, prior to transport to Site 40.

From the CUB, we traveled to Outfall #5.² After viewing Outfall #5, we then drove to Outfall #4. A hose was lying on the ground next to Outfall #4. Mr. Rick Hersemann, Physical Scientist DOE, explained that the hose was being used to pump the pond storm water to a ditch that connected to the Indian Creek when the pond filled to a certain level. *See, photograph 1.*

After viewing the Outfall #4, we then proceeded to the Technical Division Industrial Building #4 to inspect a future SAA. This particular laboratory, the super conductor laboratory area, was in the process of being prepared for future use and operation. Mr. Charlie Cooper, of this laboratory, explained to us that a 30-gallon container of hazardous waste, hydrofluoric acid, will be collected in this laboratory as an SAA. He also explained that a pH adjuster, neutralization system will be used in this area. The neutralized water will then be discharged into the sewer system. According to Mr. Cooper, the scheduled operation of this new research line will begin in June of 2011. *See, photograph 3.*

Ms. Bridget Scerini, Waste Coordinator of the Technical Division, then showed us the SAA for the Technical Division Industrial Building #4. The SAA was directly outside the building and the non-hazardous and hazardous wastes were being stored inside of a locked box. Ms. Scerini un-locked the box and one bag of hazardous waste, properly labeled, was being stored inside of the box. The label, located on the bag, described the hazardous waste as Kim Wipes and gloves that were contaminated with isopropyl and ethyl alcohols from the Derek Plant. An accumulation date of, 2/1/11, was also located on the label. *See, photographs 3 and 4.*

² Photographs 1 through 4 were pictures of the Outfall #5; however the photographs were accidentally deleted from the camera and therefore are not included in this inspection report.

We then continued to the Technical Division Industrial Building #5, where the Collector Detection Facility (CDF) is located. Mr. Dale Allspich and Ms. Angela Sands discussed the alcohol system and storage lockers used within this division. They described the processes within this division and explained that the alcohol vapor is used to clean the wires of the chamber to keep it clean. No hazardous waste was being stored, or generated, within this division, at the time of the inspection.

From the Technical Division Industrial Building #5, we then inspected Site 55, which is the Hazardous Waste Storage Area. Mr. Arnold and Mr. Hockin both joined us, at this time, and escorted us through Site 55 for our inspection. Site 55 consists of three buildings, WS-1, WS-2 and WS-3. WS-3 is the permitted hazardous waste storage building where hazardous wastes may be stored up to one (1) year.

We began the inspection in WS-3, in the universal waste storage area, where a thermometer and various mercury-containing equipment were being stored in a cabinet. In this same building, 2 x 55-gallon containers, labeled as "radioactive material and PCB ballasts, mixed waste PCB ballasts," were being stored. Both containers were labeled with a date of 9/2/1990. *See, photographs 5 and 6.*

Mr. Arnold and Mr. Hockin then showed us the equipment storage room of WS-3, where various types of equipment were being stored. Emergency response equipment, consisting of absorbent materials, over-pack drums and personal protective equipment were being maintained in this equipment storage room. *See, photographs 7 and 8.*

At the time of this inspection, no corrosive hazardous wastes were being stored in the main corrosive storage areas of WS-3. The allowable volume of hazardous waste was well within permitted levels at the time of the inspection. The corrosive storage areas were equipped with a four-inch tall concrete berm. The floor of WS-3 was constructed of reinforced concrete and was coated with epoxy. The floor was also free of gaps, cracks or any other such defects. The inside perimeter of the building was also equipped with a four-inch concrete berm.

The building was not equipped with overhead sprinklers; however it was equipped with fire extinguishers, an emergency phone, evacuation horns, an emergency shower and eye wash station, and emergency lighting. The building was equipped with four (4) exit doors and one steel roll-up door for movement of drums and pallets. Wastes were properly segregated. The building was meticulously clean and the floor was observed to be in excellent condition, at the time of the inspection. All containers were observed to be properly labeled and in good condition. *See, photographs 9 and 10.*

From WS-3, we proceeded to WS-1. Universal waste storage, such as lead/acid batteries, empty crates, bags of asbestos, mineral oils and special wastes were being stored in this building. Mr. Arnold stated that FluoroCycle is the company used to "pick-up" and recycle Fermilab's fluorescent light bulbs. Also in this building, several cabinets of flammable hazardous waste were being positioned on the south/west side of the building. A few containers of flammable

hazardous waste were being stored inside of these cabinets, at the time of the inspection. *See, photographs 11 through 16.*

We then proceeded to Building WS-2-W, where one hazardous waste lab pack container was being stored. The container was labeled as, "corrosive, D002, hydrofluoric acid, nitric acid, phosphoric acid and sulfuric acids." One container of hazardous waste solvent-contaminated rags was also being stored in this location. The container was labeled with the hazardous waste codes of, "D001, F003 and F005." Other cabinets in this area were storing small containers of hazardous waste and all containers were properly labeled. *See, photographs 17 through 21.*

Mr. Arnold explained that Fermilab uses a drum crusher in order to crush RCRA empty containers and discard of them in the scrap metal dumpster. The drum crusher was also located in Building WS-2. *See, photograph 22.*

In Building WS-2-E, 4 x 55-gallon containers of hazardous waste were being stored on a pallet. Used oil and coolants were also being stored in this area. One 55-gallon metal container of special waste was additionally being stored in this area. Mr. Arnold explained that oil, water, ethylene glycols and propylene glycols are collected in this container as special waste. *See, photographs 23 through 27.*

When we left the Building WS-2, I observed a dumpster being stored outside and on the West side of Site 55. Mr. Arnold stated that Fermilab stores scrap metal inside of this dumpster. *See, photograph 28.*

This concluded the inspection of Site 55.

From Site 55, we then continued to view Outfall #2 and Outfall #3. *See, photographs 29 and 30.*

The site inspection had been completed for this day, March 28, 2011.

SITE INSPECTION (MARCH 29, 2011):

We continued the site inspection on March 29, 2011, at the Vehicles Maintenance Building. Mr. George Davidson and Mr. Brian Niesman both escorted us on our inspection of the Vehicles Maintenance Building. A Safety-Kleen parts washer was being used in this building, at the time of the inspection. Mr. Davidson explained that Fermilab probably recycles about 45-60 gallons of mineral spirits per year. *See, photograph 31.*

No paint booths were being used in this building. Used oil was being stored and collected in a 30-gallon container. Also non-hazardous waste containers and empty containers were being stored in the Vehicle Maintenance Building shed. *See, photograph 32.*

This Vehicle Maintenance Building was the last area inspected as part of the physical site inspection. At this point, Mr. Hersemann escorted Mr. Jim Clark, TSCA Inspector Illinois Environmental Protection Agency, and me to Site 40 to meet with Mr. Arnold to conduct the records review inspection.

RECORDS REVIEW:

Mr. Arnold and Mr. Hersemann aided us in the review of the hazardous waste records after we completed the physical site inspection.

The records that I inspected were records required under 35 IAC § 722 [40 CFR § 262] for large quantity generators, which included hazardous waste determination information, waste analyses, manifests, emergency procedures and training records.

I also inspected records required under Fermilab's Part B permit, United States Department of Energy Fermilab, Hazardous Waste management RCRA Part B Permit, 0890105010, IL6 890 030 046.

1. Manifests

I reviewed the manifests of the hazardous waste shipments from January 2010 to the time of the inspection.³ The manifests were being completed and stored correctly and I did not observe any deficiencies with the manifests.

During the manifest review, I noted that Fermilab's batteries were being shipped to Battery Solutions; the lab packs were being performed by Clean Harbors; the used oils were being shipped to Safety-Kleen; fluorescent light bulbs were being sent to FluoroCycle; medical waste was being shipped to Stericycle; and, the non PCB light ballasts for reclamation were being shipped to T&S Trading.

2. Waste Analysis and Recordkeeping

I observed that Fermilab did have, as records on-site, land disposal restriction (LDR) notification forms for the shipments of hazardous waste.

3. Personnel Training

I reviewed the RCRA training records. Mr. Arnold, Mr. Hockin and Mr. Greg Thompson were the three main contacts responsible for waste "pick-ups" at the generation points, management of Site 55, and for preparation of shipping manifests and coordination with waste contractors for off-site shipment of hazardous waste to licensed disposal facilities. The records verify that these

³ Since Fermilab is inspected on an annual basis by either the IEPA or by EPA, I reviewed the records of manifests from 2010 to present, rather than review the prior three years of records.

employees received adequate RCRA training on an annual basis. Training records, for each employee involved in the management of hazardous waste, were being maintained on file by the Hazard Control Technology Team for the current year and for prior years.

4. Contingency Plan

A Contingency Plan was available for my review during the inspection. I did not observe any deficiencies with the plan at the time of the inspection.

5. Preparedness and Prevention

Based on my review of Fermilab's records, Fermilab had made agreements with local emergency authorities, contractors and had made arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the type of injuries or illnesses which could result from fires, explosions or releases at the facility.

6. Biennial Reporting

Based on my review of the records, Fermilab had filed a Hazardous Waste Annual Report by March 1, with the IEPA for the reporting year of 2010. Fermilab does have a closure plan in place for the HWSF. The closure cost estimate was \$203,587 as of March 1, 2010. As a federal facility, Fermilab is not required to have financial assurance mechanisms in place pursuant to 40 CFR 264 Subpart H.

7. Weekly and Daily Inspections

I observed at the time of the inspection that Fermilab was documenting daily, weekly and monthly inspections of the hazardous waste storage container areas and the buildings as required by the Part B permit, which states that the Permittee shall conduct regular inspections of the Container Storage Facility, Secondary Containment Area, Security Equipment and Facility Periphery, Emergency Equipment and Personnel Protective Equipment, in accordance with the specified inspection schedule.

CONTINUATION OF SITE INSPECTION (MARCH 29, 2011):

After the records review, I continued a physical site inspection with Mr. Kevin Vuilleumier, Environmental Engineer, Air and Radiation Division, EPA, and Ms. Lynne Roberts, Federal Facilities Coordinator, OECA, EPA. We inspected the Technical Division Industrial Building #2. An SAA box was positioned in this area, outside and within a fenced area. Ms. Scerini explained that this was formerly an SAA storage box; however the box was empty and this area was no longer being used as an SAA. A dumpster was also being stored within this site. Ms. Scerini also stated that the dumpster was storing scrap metal obtained from the various Fermilab locations.

We inspected the Technical Division Industrial Building #3 last. An empty container of oil was also being stored in one of the labs with no label. I explained that when used oil is placed inside of a container, the container needs to be labeled with the words, "Used Oil."

Lastly, Fermilab uses alumina oxide (Sinclair Mineral and Chemical Company), Grit Blast, to perform some blasting of certain parts of the linear accelerator. The dust collected in the bottom of the Sinclair blasting machine was being collected in 30-gallon or 55-gallon containers and classified as special waste, according to Mr. Arnold. The containers were stored at Site 55 until shipped off-site for disposal.

CLOSING CONFERENCE:

Ms. Roberts conducted the closing conference at 3:35pm on March 29, 2011. Each MMI EPA contact from each media reviewed his or her findings with the following:

- *Piermaria J. Oddone, Fermilab Director*
- *Young-Kee Kim, Fermilab Deputy Director*
- *Bruce Chrisman, DOE Deputy Site Manager, Chief Operating Officer*
- *Martha Michels, Fermilab Deputy Director, ES&H Division*

During the closing conference, I stated that I had not noticed any deficiencies with the RCRA program and that I thought it was being managed very well. However, I explained that I would need to review my notes, paperwork and photographs to make a final determination.

We departed Fermilab around 4:30pm.

ATTACHMENT: (1)

Attachment 1 Photographs taken during the time of the inspection.

Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 1
Photo Filename DSCN0078.JPG
Date/Time 3/28/2011
11:46:00 AM
Photographer Jamie Paulin

Description

Outfall #4, located near Minerva. Pumps were being used to pump pond storm water to a ditch when the pond filled to a level considered to be too high.



Disk Number 1
Photo Number 2
Photo Filename DSCN0079.JPG
Date/Time 3/28/2011
1:28:00 PM
Photographer Jamie Paulin

Description

Future satellite accumulation area (SAA). A 30-gallon container of hazardous waste, hydrofluoric acid, will be collected in the super conductor laboratory area. Tech Division Industrial Building #4.



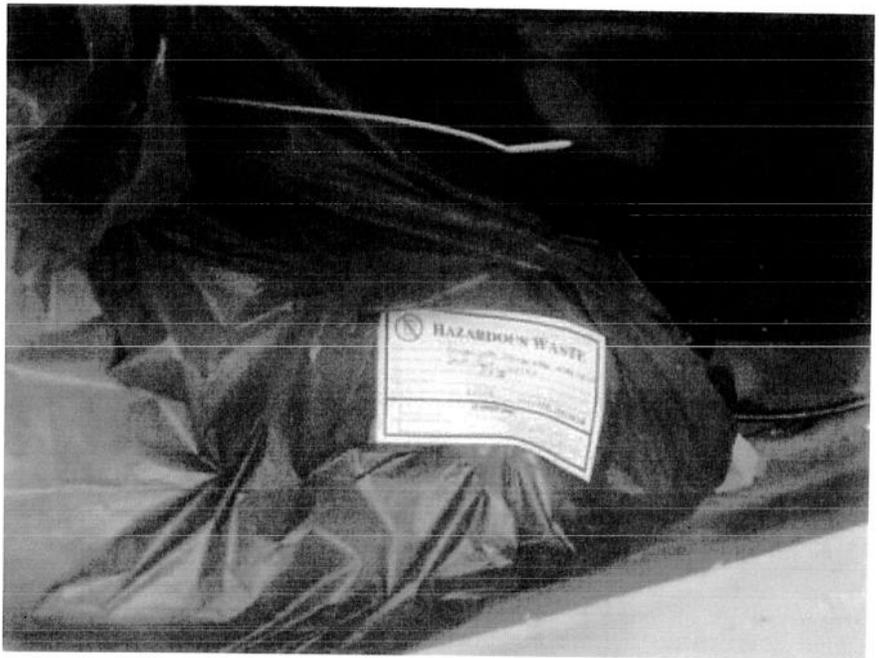
Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 3
Photo Filename DSCN0080.JPG
Date/Time 3/28/2011
1:55:00 PM
Photographer Jamie Paulin

Description

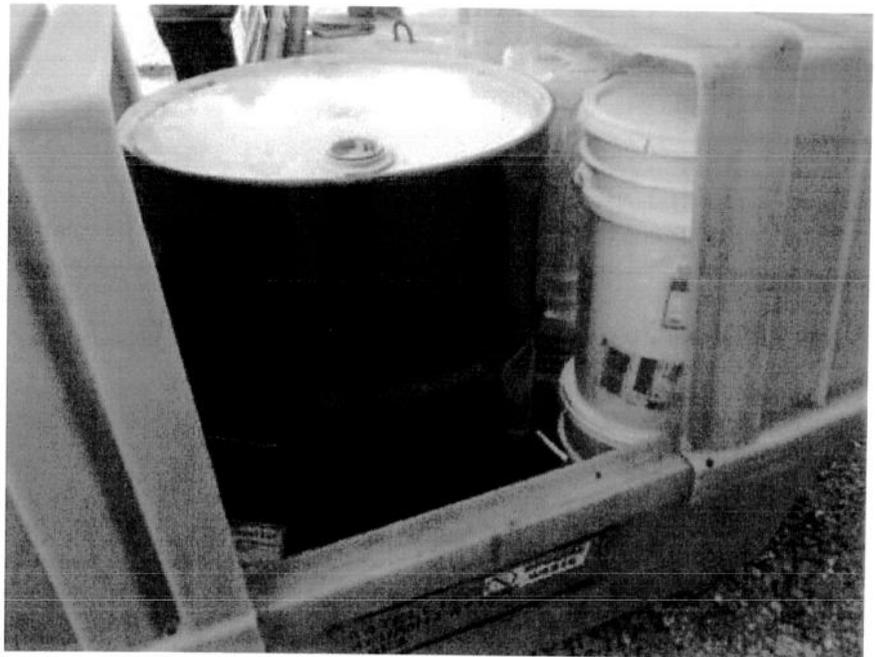
SAA container (bag) of hazardous waste, located in the Tech Division 4 area. Label described hazardous waste as Kim wipes & gloves contaminated with isopropyl and ethyl alcohols from Derek Plant. Accumulation date of 2/1/11 was located on label.



Disk Number 1
Photo Number 4
Photo Filename DSCN0081.JPG
Date/Time 3/28/2011
1:55:00 PM
Photographer Jamie Paulin

Description

SAA container (bag) of hazardous waste, located in the Tech Division 4 area. Other containers were storing special waste. Label described hazardous waste, in bag, as Kim wipes & gloves contaminated with isopropyl and ethyl alcohols from Derek Plant.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 5
Photo Filename DSCN0082.JPG
Date/Time 3/28/2011
2:58:00 PM
Photographer Jamie Paulin

Description

Universal waste storage in equipment storage area of building, WS-3, ES&H/Site. A thermometer and mercury containing equipment were being stored in the cabinet.



Disk Number 1
Photo Number 6
Photo Filename DSCN0083.JPG
Date/Time 3/28/2011
2:59:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-3. 2x55-gallon containers labeled as radioactive material and PCB ballasts, mixed waste PCB ballasts. Both containers were labeled with a date of 9/2/1990.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 7
Photo Filename DSCN0084.JPG
Date/Time 3/28/2011
3:05:00 PM
Photographer Jamie Paulin

Description

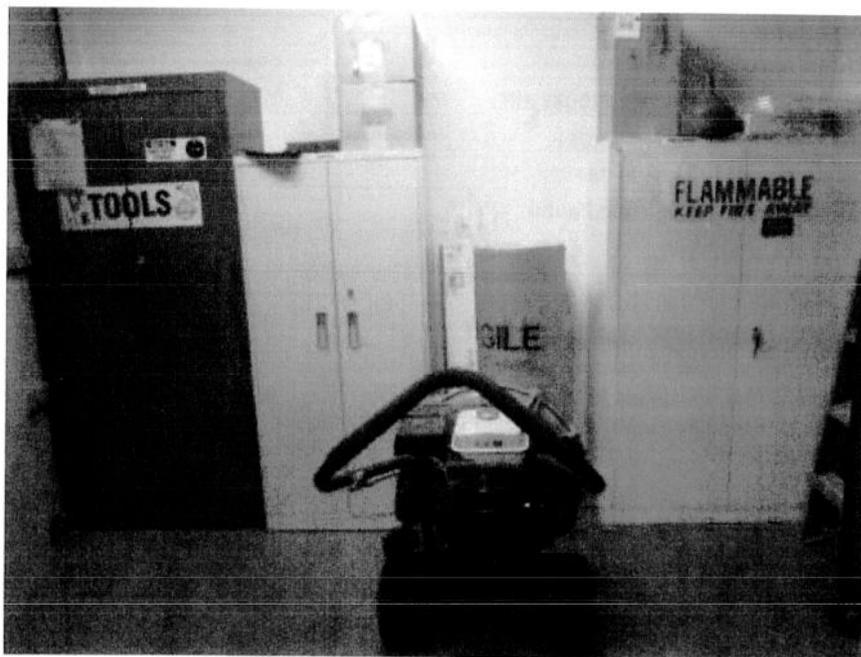
Emergency equipment storage, located in ES&H/Site 55 WS-3.



Disk Number 1
Photo Number 8
Photo Filename DSCN0085.JPG
Date/Time 3/28/2011
3:05:00 PM
Photographer Jamie Paulin

Description

Equipment storage area, located in ES&H/Site 55 WS-3.



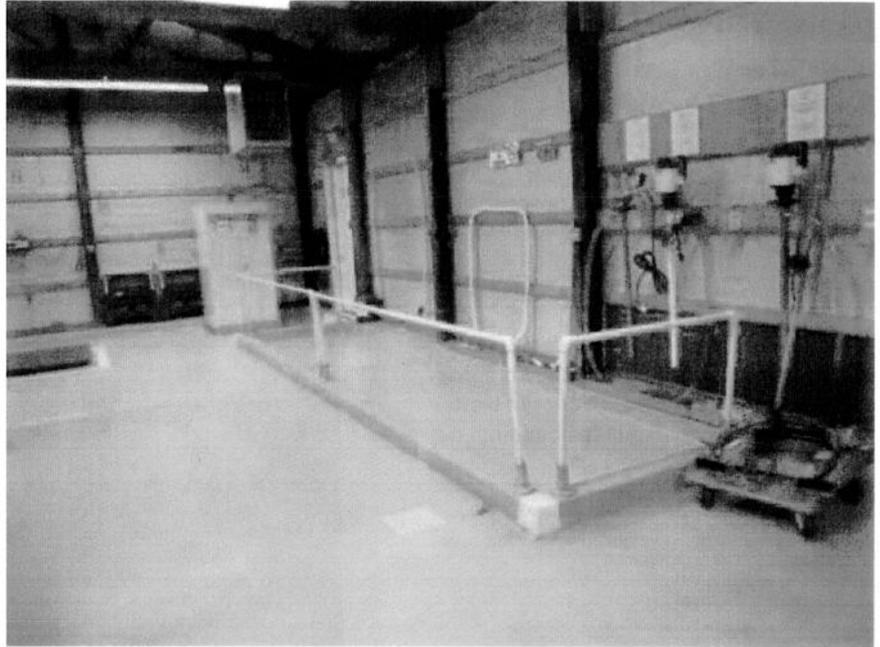
Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 9
Photo Filename DSCN0086.JPG
Date/Time 3/28/2011
3:06:00 PM
Photographer Jamie Paulin

Description

Corrosive containment storage area, located in ES&H/Site 55 WS-3. No corrosive hazardous waste was being stored in this area at the time of the inspection.



Disk Number 1
Photo Number 10
Photo Filename DSCN0087.JPG
Date/Time 3/28/2011
3:06:00 PM
Photographer Jamie Paulin

Description

Corrosive containment storage area, located in ES&H/Site 55 WS-3. No corrosive hazardous waste was being stored in this area at the time of the inspection. Mixed RAD/PCB waste containers were located in north/west corner of building.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 11
Photo Filename DSCN0088.JPG
Date/Time 3/28/2011
3:10:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-1. Universal waste storage, such as lead/acid batteries. Empty crates, bags of asbestos and special wastes were also being stored in this building.



Disk Number 1
Photo Number 12
Photo Filename DSCN0089.JPG
Date/Time 3/28/2011
3:10:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-1. Universal waste storage, such as lead/acid batteries. Empty crates, bags of asbestos, mineral oils and special wastes were also being stored in this building.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 13
Photo Filename DSCN0090.JPG
Date/Time 3/28/2011
3:15:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-1. Universal waste storage; lead/acid batteries. Batteries were being stored in a wooden crate on a pallet.



Disk Number 1
Photo Number 14
Photo Filename DSCN0091.JPG
Date/Time 3/28/2011
3:17:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-1. Flammable cabinet 3. Storage of flammable hazardous waste; south/west area of building.



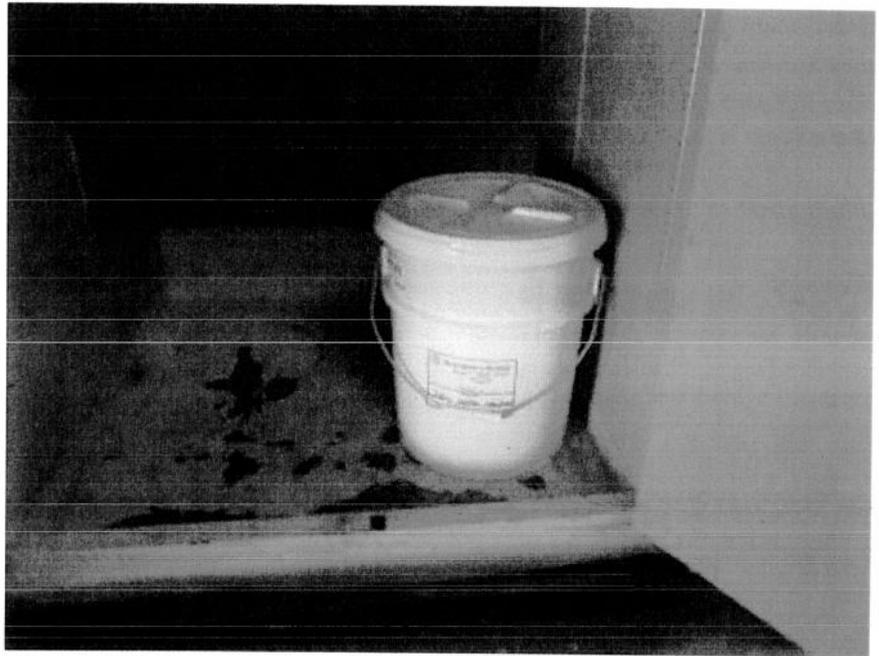
Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 15
Photo Filename DSCN0092.JPG
Date/Time 3/28/2011
3:17:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-1. Flammable cabinet 3.
Storage of flammable hazardous waste;
south/west area of building.



Disk Number 1
Photo Number 16
Photo Filename DSCN0093.JPG
Date/Time 3/28/2011
3:19:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-1. Hazardous waste
storage area. Flammable Liquids Cabinets.
Special wastes were also being stored in this
area.



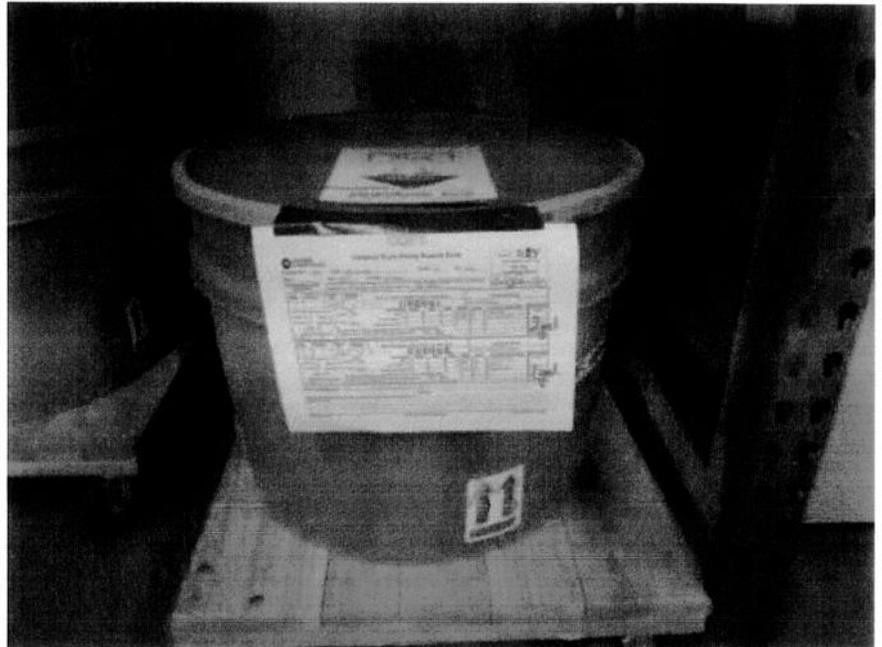
Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 17
Photo Filename DSCN0094.JPG
Date/Time 3/28/2011
3:22:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2-W. Hazardous waste storage lab pack container. Corrosive; D002, hydrofluoric acid, nitric acid, phosphoric acid and sulfuric acids.



Disk Number 1
Photo Number 18
Photo Filename DSCN0095.JPG
Date/Time 3/28/2011
3:24:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2-W. Hazardous waste container of solvent-contaminated rags with waste codes of D001, F003 and F005.



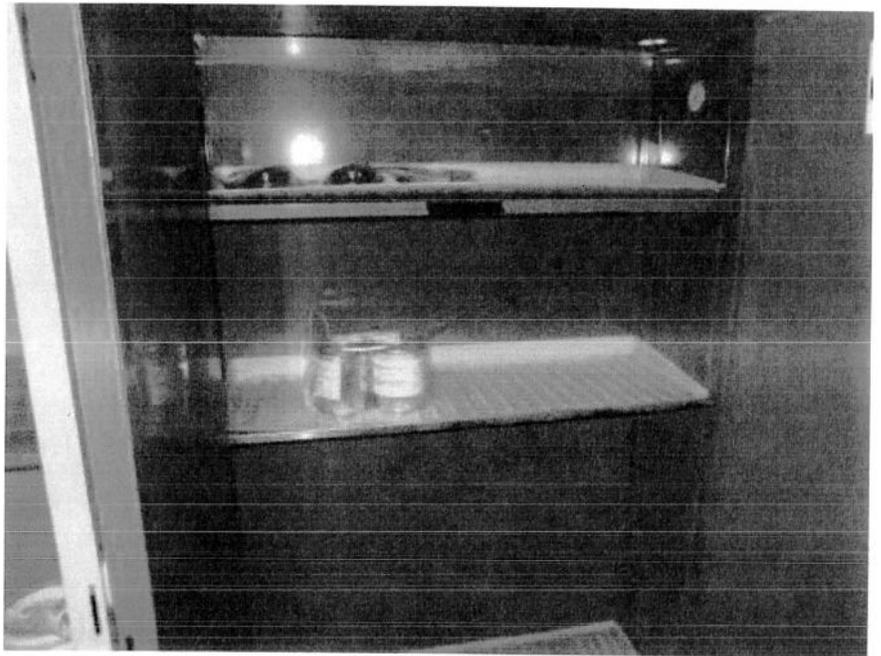
Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 19
Photo Filename DSCN0096.JPG
Date/Time 3/28/2011
3:25:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2-W. Hazardous waste storage in cabinet. Small containers were being stored in plastic bags.



Disk Number 1
Photo Number 20
Photo Filename DSCN0097.JPG
Date/Time 3/28/2011
3:25:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2-W. Hazardous waste storage in cabinet. F002 waste dated 3/1/11.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 21
Photo Filename DSCN0098.JPG
Date/Time 3/28/2011
3:25:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2-W. Hazardous waste storage in cabinet. Small containers were being stored in plastic bags.



Disk Number 1
Photo Number 22
Photo Filename DSCN0099.JPG
Date/Time 3/28/2011
3:29:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2. Drum crusher was being used to crush used empty containers to be discarded into dumpster.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 23
Photo Filename DSCN0100.JPG
Date/Time 3/28/2011
3:34:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2 East. Hazardous waste storage. Four 55-gallon containers were being stored on a pallet with hazardous waste labels. Used Oil was being stored on the right and coolants were being stored on the left.



Disk Number 1
Photo Number 24
Photo Filename DSCN0101.JPG
Date/Time 3/28/2011
3:35:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2. One 55-gallon metal container of special waste. Oil, water, ethylene, propylene blend are collected in this container as special waste.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 25
Photo Filename DSCN0102.JPG
Date/Time 3/28/2011
3:35:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2. One 55-gallon metal container of special waste. Oil, water, ethylene, propylene blend are collected in this container as special waste.



Disk Number 1
Photo Number 26
Photo Filename DSCN0103.JPG
Date/Time 3/28/2011
3:37:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55 WS-2-E. Storage of used oil and various other types of waste.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 27
Photo Filename DSCN0104.JPG
Date/Time 3/28/2011
3:37:00 PM
Photographer Jamie Paulin

Description

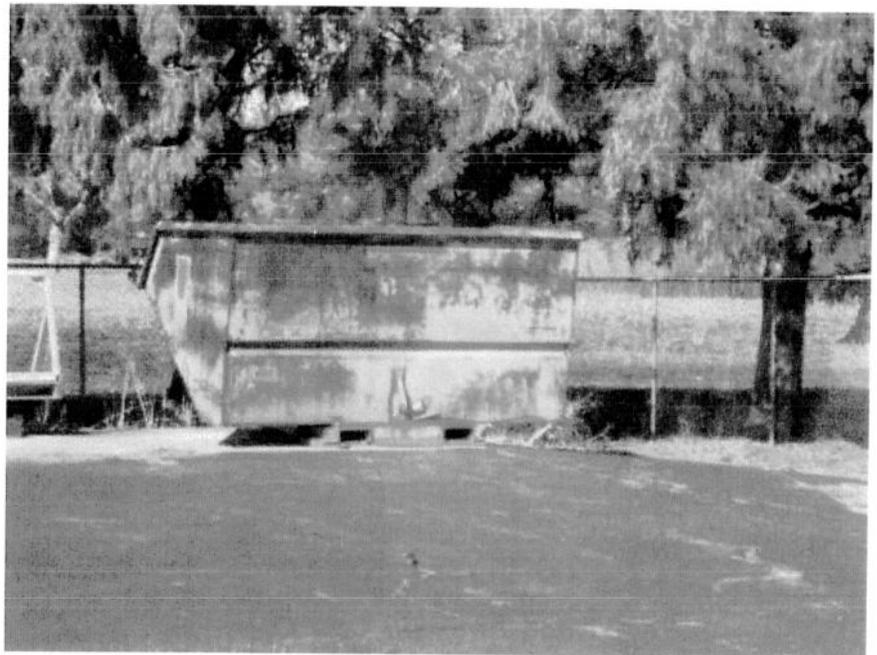
ES&H/Site 55 WS-2-E. West side of building. Various material storage.



Disk Number 1
Photo Number 28
Photo Filename DSCN0105.JPG
Date/Time 3/28/2011
3:39:00 PM
Photographer Jamie Paulin

Description

ES&H/Site 55. Outside - West side. Scrap dumpster.



Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 29
Photo Filename DSCN0110.JPG
Date/Time 3/28/2011
4:04:00 PM
Photographer Jamie Paulin

Description

Outfall 002.



Disk Number 1
Photo Number 30
Photo Filename DSCN0111.JPG
Date/Time 3/28/2011
4:32:00 PM
Photographer Jamie Paulin

Description

Outfall 003.



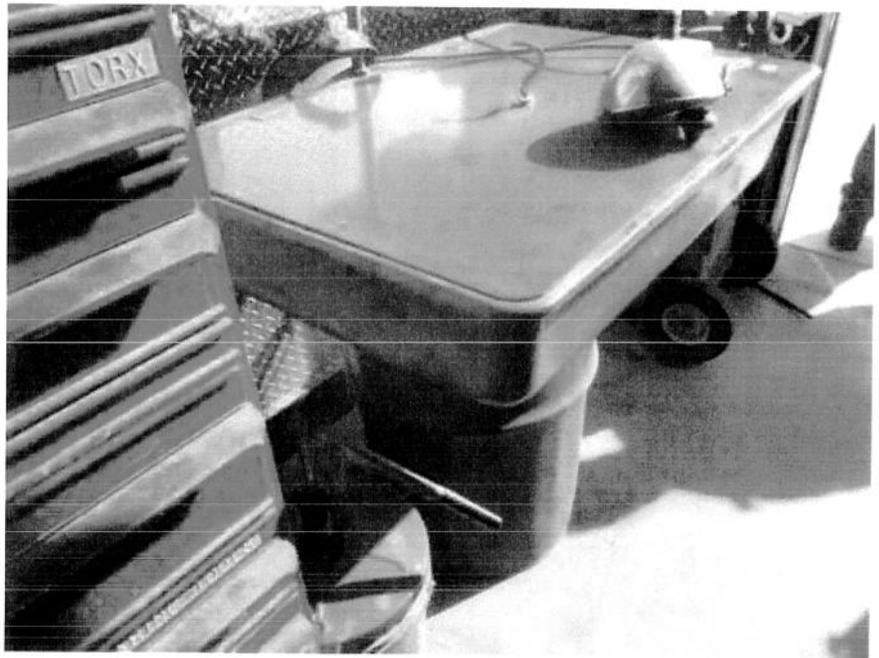
Photographs for United States Department of Energy Fermilab

Media: RCRA

Disk Number 1
Photo Number 31
Photo Filename DSCN0112.JPG
Date/Time 3/29/2011
9:54:00 AM
Photographer Jamie Paulin

Description

Safety-Kleen parts washer was being stored in Vehicle Maintenance Building.



Disk Number 1
Photo Number 32
Photo Filename DSCN0113.JPG
Date/Time 3/29/2011
9:58:00 AM
Photographer Jamie Paulin

Description

Non-hazardous waste was being stored (and locked) in the waste storage shed of the Vehicle Maintenance Building.



APPENDIX D

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL DISCHARGE POLLUTION ELIMINATION SYSTEM
(NPDES) INSPECTION**

I. IDENTIFICATION

- A. Facility Name and Address:** Fermi National Accelerator Laboratory
P.O. Box 500, MS 119
Batavia, IL 60510-5011
- B. Permit Status:** IL0026123 -- Effective date:
August 1, 2008
Expiration date: July 31, 2013
ILR10N366 – Effective date:
August 9, 2010
- C. Responsible Official(s):** Katie Kosirog -- Fermilab
Rick Hersemann -- DOE
- D. Facility Contacts:** Same as above
- E. Inspection Participants:** Lynne Roberts, U.S. EPA
Jamie Paulin, U.S. EPA
Kevin Vuilleumier, U.S. EPA
Arturo Cisneros, U.S. EPA
Valdis Aistars, U.S. EPA
Jim Clark, IEPA
- F. Date of Inspection/Arrival Time:** March 28-29, 2011 8:50 AM
- G. Report prepared by:** Valdis Aistars, U.S. EPA

II. FACILITY OPERATIONS AND INFORMATION

Facility Background:

Fermilab is a research center located in Batavia, Illinois. This facility is engaged in conducting particle physics experiments designed to give scientists the capability to address questions about the basic physical laws that govern the universe. The operation of the Fermilab facilities requires large amounts of cooling water. This water is supplied by the system of ditches, ponds, and lakes which collect stormwater from the site. Most

of this water is continuously recirculated within the system, however, during extreme rain events, it will be discharged to the waters of the State. There are six stormwater outfalls whose discharges are governed by NPDES permit IL0026123.

III. MARCH 28-29, 2011 INSPECTION:

U.S. EPA and IEPA representatives conducted a multi-media inspection at the facility on March 28-29, 2011. The objective of the CWA portion of the inspection was to determine Fermilab's compliance with their NPDES permit for stormwater, their construction stormwater permit(s), and with the federal requirements for pretreatment. A tour of the various parts of the facility, including all six outfall locations, was conducted over the two days. In addition, various records regarding sampling, operation and maintenance, and stormwater inspection activities were reviewed on the second day.

Records:

Discharge monitoring reports for the stormwater permit were reviewed and compared to the laboratory results. Stormwater inspection reports were reviewed and compared to the permit requirements. Construction stormwater inspection reports were reviewed for completeness. The records of the pretreatment processes were reviewed after the on-site inspection to determine if the processes were properly categorized and if the testing and limits were appropriate for those categories.

Facility inspection:

The inspection began on the morning of March 28, 2011, with an opening conference led by Lynne Roberts of U.S. EPA. The subsequent tour of the facility included stops at all of the stormwater outfall locations, the current active construction site (Cryo module test facility), as well as, the proposed and existing pretreatment facilities.

The stormwater control system consists of the following:

The stormwater is collected on-site by numerous ditches and conveyed to an interconnected system of ponds and lakes. The water flows by gravity and is also pumped through this system and withdrawn from it at various points to help cool the accelerator that is used for particle experiments. Outfalls 001, 002, and 003 have gates which provide a means of preventing off-site migration of polluted water, if necessary. Outfall 004 is the overflow for Minos pond which is a retention basin. Outfalls 005 and 006 are overflows for ponds C and D, respectively.

The currently active construction project (Cryo module test facility) is regulated by a construction stormwater permit (ILR10N366).

The pretreatment system(s) consist of the following:

The Central Utility Building (CUB) contains the pretreatment system for the spent/depleted mixed bed demineralizer resins that are used to purify the recirculating demineralized water which cools a variety of electrical equipment. The system for treating demineralizer regenerant waste consists of a 3,000 gallon settling tank, two 2,000 gallon settling tanks, a 6,000 gallon pH adjustment tank, a 1,500 gallon sludge holding tank, a 4 cubic foot plate and frame filter press, a 2 cubic foot sludge dryer and all necessary piping, pumps and appurtenances. The treated wastewater is batch discharged to the Batavia WWTP. The dried sludge from the treatment process is stored onsite to allow for radioactive decay before proper disposal as declassified Illinois Special Waste.

The installation of a new pretreatment system at the integrated cavity processing apparatus (IPCA) facility is ongoing. This system will consist of a 300 gallon equalization tank, a 400 gallon pH neutralization tank, and all pumps, piping, and appurtenances necessary to treat 200 gpd DAF of wastewater from Niobium etching, polishing, and air scrubber blowdown prior to batch discharge to the Batavia WWTP. The current system used for this task is a mechanical polishing process.

The Materials Development and Testing Laboratory prepares metallurgical samples for microscopic examination by cutting the sample with a diamond cutoff saw and finishing the preparation by polishing the sample. This results in a discharge of metal finishing rinsewater at a design average flow rate of 50 gpd and design maximum flow rate of 4200 gpd to the Naperville WWTP.

The machine shop uses a plasma burner to cut aluminum, mild steel, and stainless steel. The water tank for the burner holds about 4200 gallons. When the machine is drained for cleaning due to the slag build-up (once every 6-8 years), the water is discharged to the Naperville WWTP.

Pretreatment concerns identified: In accordance with 40 CFR Part 403.12 (b), (e), and (g), the semi-annual reports that must be provided to the permitting authority (USEPA) have not been sent. Data and reports have been provided to the IEPA in accordance with the operating permits issued by the State, however, to ensure compliance with the pretreatment requirements of the CWA, the information required under 403.12 must be provided to the USEPA.

Storm water concerns identified: None.

Discharge concerns identified: None.

Issue(s) discussed during the inspection: No concerns were identified at the exit interview, however, subsequent review of the records and data for pretreatment revealed the concerns identified above.

APPENDIX E



United States Environmental Protection Agency

**UNDERGROUND STORAGE TANK
INSPECTION
OF
FERMI NATIONAL ACCELERATOR LABORATORY
BATAVIA, ILLINOIS 60510**

Conducted

March 29, 2011

by

Arturo Cisneros

**United States Environmental Protection Agency
Region 5 (Mail Code: LR-8J)
Underground Storage Tanks Section
Land and Chemicals Division
77 West Jackson Boulevard
Chicago, Illinois 60604**

TRIP REPORT

DATE OF INSPECTIONS:

March 29, 2011

UST FACILITY IDENTIFICATION

Facility Name and Address

Fermi National Accelerator Laboratory
Kirk & Wilson Roads (Site 38 Fuel Service Center)
Batavia, Illinois 60510

PARTICIPANTS:

Fermilab Facility Representatives

Ms. Amber Larson
Environmental Engineer
630/840-2977

Mr. Brian Niesman
Assistant Transportation Services Manager
630/840-6899

EPA Representative

Arturo Cisneros, EPA-Region 5, Underground Storage Tanks Section, Enforcement Officer

BACKGROUND:

Fermi National Accelerator Laboratory is located in Batavia, Illinois. It employs 1,960 workers. These include about 960 physicists, engineers and computer professionals. Another 2,090 scientists and students from across the United States and around the world spend time at Fermilab to carry out research. The facility is a research center advancing the understanding of the fundamental nature of matter and energy by providing resources for qualified researchers.

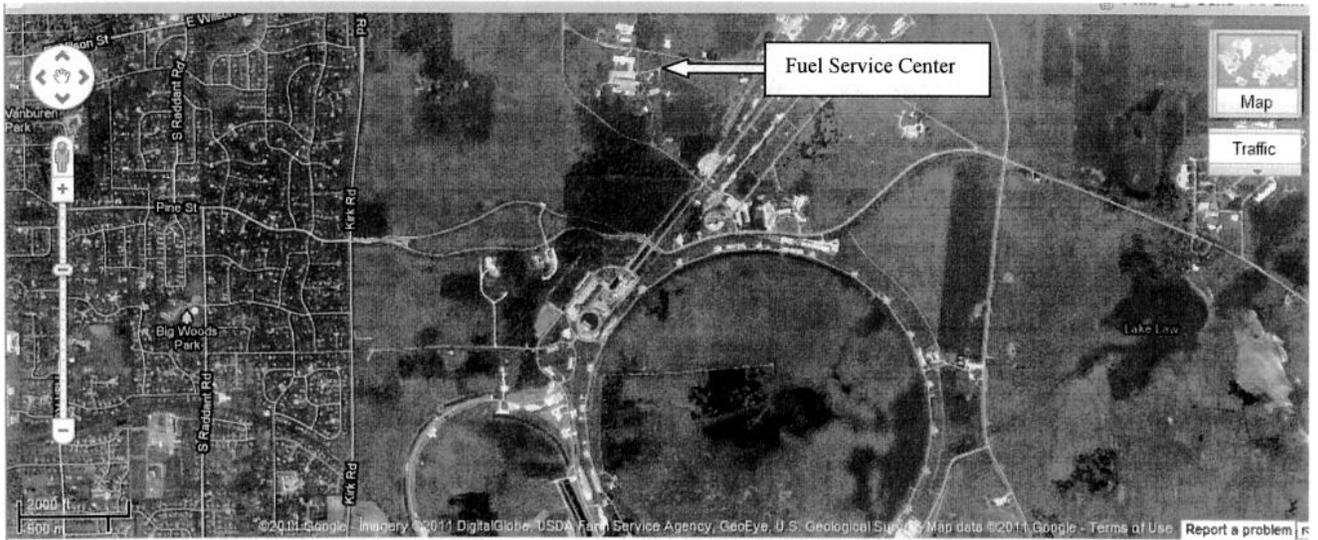
On March 29, 2011, United States Environmental Protection Agency, Region 5 (EPA), Underground Storage Tank (UST) Section traveled to Batavia, Illinois to participate in a multimedia inspection at the U.S. Department of Energy Fermi National Accelerator Laboratory facility (i.e., Fermilab). The purpose of the UST portion of the inspection was to conduct operational and compliance examinations at the Fermilab facility to determine whether the facility met the technical standards for owners and operators of federally regulated USTs. The UST inspection was one aspect of a larger scale multimedia investigation of the facility covered under a separate report.

EPA UST inspector Cisneros met with other members of the EPA multimedia team at a designated area outside of the Fermilab facility. This was the second day of EPA's multimedia

inspections, and the UST inspection was scheduled for the second day. An initial meeting with Fermilab representatives began at 8:30 am, where the team presented credentials and exchanged business cards and explained the purpose of their inspections. The team next visited the Vehicle Maintenance Building together before splitting up to conduct their various program-specific inspections.

The facility only had three federally regulated USTs located at sites 38, called the Fuel Service Center. There was an oil separator located in the Maintenance Building, however, there were no holding tanks associated with it (to store the oil), and therefore it was not regulated by the Subtitle I program.

The UST inspections consisted of physically removing covers, lids, opening dispensers, checking equipment functions, testing alarms, interview of facility personnel and review of records. A total of three USTs were inspected and only two photographs taken were taken. These were shown to the Fermilab representative for their information and clearance. The inspection findings are as follows:



Aerial view (from Google Maps) of the Fermilab research facility showing the approximate location of site 38 Fuel Service Center located north of the circular particle accelerator

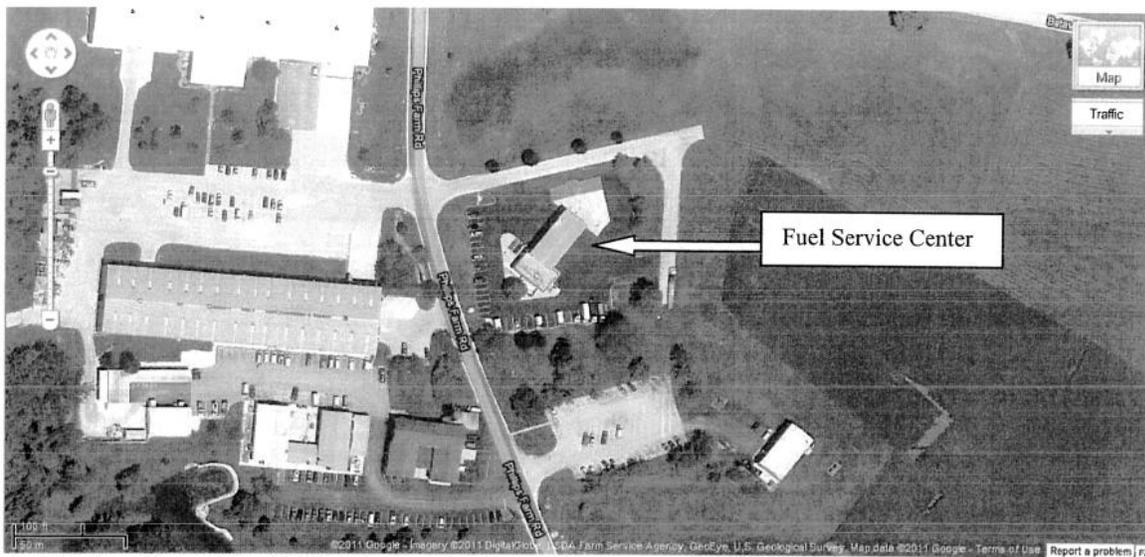
FINDINGS:

Site 38 Fuel Service Center

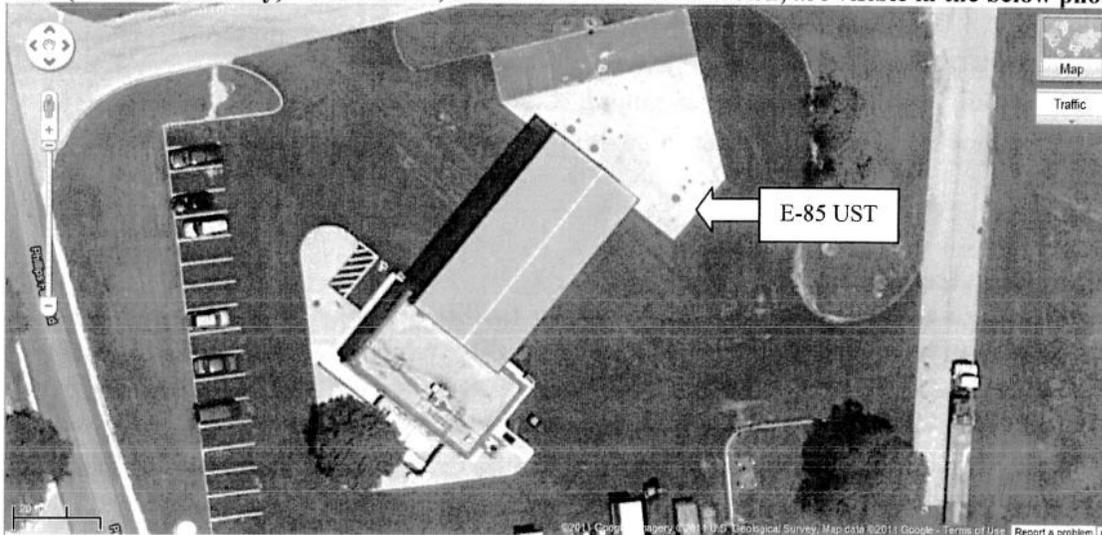
The EPA inspector arrived at the fuel service center facility at about 10:00 am and met with facility representatives overseeing the USTs. The facility, which is use for fueling facility vehicles, has one 12,000-gallon gasoline UST, one 6,000-gallon diesel UST, and one 6,000-gallon E-85 UST. All the tanks and piping were constructed of double-walled fiberglass reinforced plastic. The piping construction was verified by looking into the turbine sump and by reviewing records from the Office of the Illinois State Fire Marshal.

The facility is currently implementing Petro Vend Site Sentinel for meeting the tanks release detection monitoring requirements. The system is capable of conducting both Interstitial and Automatic Tank Gauge monitoring. Although many of the ATG records revealed invalid records due to low volume in tank #1, the inspector was able to confirm a year's worth of acceptable records for the interstitial monitoring. The facility informed the inspector that it is in the process of installing an updated OPW monitoring system.

The piping is European or Safe Suction and does not require release detection monitoring. However, the facility is also conducting interstitial monitoring for the piping. The inspector confirmed check valves at the base of each dispenser. The inspection confirmed all tanks having OPW/1 spill containments for spill protection and mechanical shut-off devices (i.e., OPW/61SO Drop Tubes) for overfill prevention.



Aerial view (from Google Maps) showing the location of site 38 Fuel Service Center. Note that the facility is located east of Kirk road and south of Wilson road near the intersection of Phillips Farm road and Batavia road (within the facility). The 3 USTs, shown in NE-SW orientation, are visible in the below photo.



CONCLUSION

Overall the EPA inspector did not note any significance issues/violations during the inspection on 3/29/11. All records were adequate, the spill and overfill protection were acceptable. Although no release detection monitoring was required for the piping, since it was safe suction, the inspector did notice that one of the rubber boots surrounding the pipe for the E-85 UST was clamped and did not allow the interstitial monitoring to operate properly. The inspector recommended that the facility have a contractor evaluate the system and possibly remove/loosen this boot. The facility agreed to this.



Photo #1: View of site 38 Fuel Service Center, looking south. The three vent pipes can be seen to the right of the photos. The photo was taken on 03/29/11 @10:55 am.

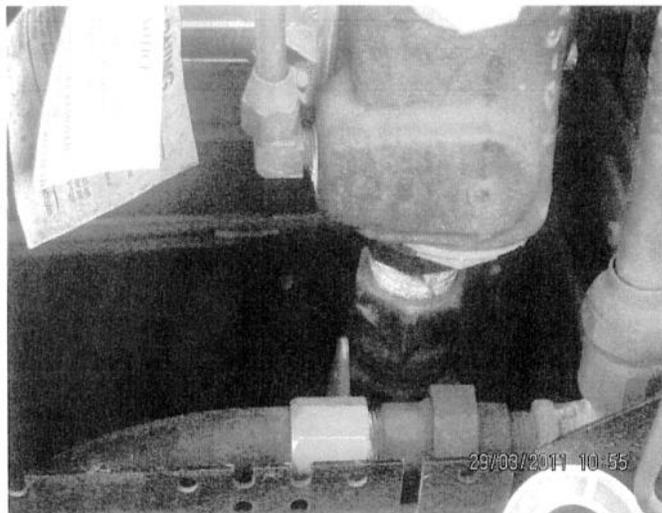


Photo #2: View underneath one dispenser pump of site 38 Fuel Service Center. The photo is showing the location of the suction pump "check-valve" required for a "safe suction" piping system. The photo was taken on 03/29/11 @ 10:55 am.

APPENDIX F

PCB COMPLIANCE INSPECTION

Company: Fermi Lab

INSPECTION DATE: March 29, 2011.

FINDINGS AND CONCLUSIONS:

The facility appeared to be in compliance with the rules promulgated under 40 CFR Part 761.

INSPECTOR: Jim Clark

REPORT ON INSPECTION TO DETERMINE
COMPLIANCE WITH PCB REGULATIONS

Fermilab / Department of Energy
Wilson Road and Pine Street
P. O. Box 2000
Batavia, IL 60510

March 29, 2011

PERFORMED BY:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

AS AUTHORIZED UNDER THE
U.S. ENVIRONMENTAL PROTECTION AGENCY
TSCA/PCB COOPERATIVE AGREEMENT PROGRAM

PCB COMPLIANCE INSPECTION REPORT

1. OBJECTIVES

The inspection was conducted to document the facility's handling, storage, and disposal practices and to determine its compliance with the PCB Regulations, 40 CFR Part 761, as published in the Federal Register of May 31, 1979, and as amended.

2. COMPANY IDENTIFICATION

Fermilab / Department of Energy
Wilson Road and Pine Street
P. O. Box 2000
Batavia, IL 60510

Responsible Official

Rick Herseman - Physical Scientist

3. DATE OF INSPECTION

March 29, 2011

4. PARTICIPANTS

Company

Rick Herseman

IEPA

Jim Clark

5. COMPANY BACKGROUND

PCBs No PCBs Discovered

Fermilab is a 6800 acre particle physics lab located in Batavia, in Kane County, Illinois. It is owned by the Department of Energy and managed by a consortium of 90 universities known collectively as the Universities Research Association, Inc. It was established in late

1967 by the U. S. Government and currently employs about 2000 individuals. More information can be found at <http://www.fnal.gov/>.

6. INSPECTION SUMMARY

A. Opening Conference

The inspector met with company officials as indicated in Section II, presented TSCA Inspection Credentials, explained the purpose of the inspection, and presented for signature the TSCA Inspection Forms as indicated below:

- Notice of Inspection
- TSCA Confidentiality Notice
- Receipt for Samples/Documents collected

These documents are enclosed as Attachments 1, 2, and 3 and were signed by Rick Herseman.

B. Circumstances Applicable to this Inspection

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use/Authorizations | <input checked="" type="checkbox"/> Disposal |
| <input type="checkbox"/> Manufacturing | <input checked="" type="checkbox"/> Marking |
| <input checked="" type="checkbox"/> Record keeping | <input type="checkbox"/> Processing |
| <input type="checkbox"/> Distribution | <input checked="" type="checkbox"/> Storage |

C. CITATION

- Not Applicable

D. CLOSING CONFERENCE

The inspector explained the three possible outcomes of the inspection and informed the company officials that the Regional Office would make a final determination and notification.

7. SAMPLES/PHOTOGRAPHS/DOCUMENTS

- See Attachments as listed

8. ATTACHMENTS

1. Notice of Inspection
2. TSCA Inspection Confidentiality Notice
3. Receipts for Samples and Documents
4. Disposal Documents

5. Photographs

INSPECTOR'S COMMENTS

XX Use/Authorizations (761.30)

XX Marking (761.40)

XX Storage (761.65)

XX Disposal (761.60)

XX Record keeping (761.180)

Use/Authorizations (761.30)

The inspector was told that at one time, Fermilab utilized PCBs in some of their specialized electrical equipment. However, over the years, the only remaining uses appear to be old fluorescent ballasts and small filter capacitors that contain PCBs. These items are being replaced by newer non-PCB items and the old PCB items are shipped out as TSCA waste and incinerated.

Marking (761.40)

The old PCB items are stored at a site known as Site 55. The doors of the building appear to be properly marked with the M_L sticker.

Disposal (761.60)

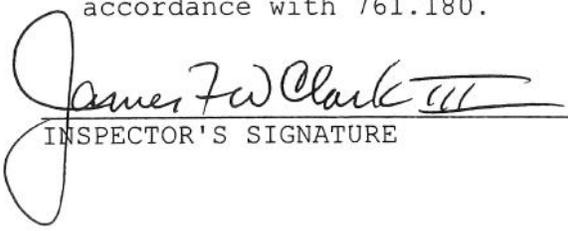
The inspector received copies of manifests and certificates of Destruction for all manifested TSCA waste. The waste appears to have been properly disposed.

Storage (761.65)

The storage site has M_L stickers on all doors, had a roof and Portland cement curbing in accordance with 40 CFR 761.65(b).

Recordkeeping (761.180)

Fermilab had disposal records going back three (3) years in accordance with 761.180.


INSPECTOR'S SIGNATURE

13 April 2011
DATE

Attachment 1

Notice of Inspection



United States Environmental Protection Agency
 Washington, D.C. 20460
 Toxic Substances Control Act
 NOTICE OF INSPECTION

Form Approved
 OMB No. 2070-0007
 Approval Expires 07-31-96

The public reporting burden for this collection of information is estimated to average 5 minutes per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information to the Chief, Information Policy Branch (PM-223), US Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked ATTENTION: Desk Officer for EPA.

1. Investigation Identification			2. Time	3. Firm Name
Date 03-29-11	Inspector No. EE019	Daily Seq. No. 001	10:30 AM	Fermitab / DOE
4. Inspector Address 4201 9511 W. Harrison St. Des Plaines IL 60016-1563			5. Firm Address P.O. Box 2000 Batavia IL 60510	

REASON FOR INSPECTION

Under the authority of Section 11 of the Toxic Substances Control Act:

For the purpose of inspecting (including taking samples, photographs, statements, and other inspection activities) an establishment, facility, or other premises in which chemical substances or mixtures or articles containing same are manufactured, processed or stored, or held before or after their distribution in commerce (including records, files, papers, processes, controls, and facilities) and any conveyance being used to transport chemical substances, mixtures, or articles containing same in connection with their distribution in commerce (including records, files, papers, processes, controls, and facilities) bearing on whether the requirements of the Act applicable to the chemical substances, mixtures, or articles within or associated with such premises or conveyance have been complied with.

In addition, this inspection extends to (Check appropriate blocks):

- A. Financial data
- B. Sales data
- C. Pricing data
- D. Personnel data
- E. Research data

The nature and extent of inspection of such data specified in A through E above is as follows:

Certification			
I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			
Inspector Signature <i>Nim Clark</i>		Recipient Signature <i>Rick Hersemann</i>	
Name Nim Clark		Name Rick Hersemann	
Title EPA III	Date Signed 03-29-11	Title Physical Scientist	Date Signed 3/29/11

Attachment 2

TSCA Inspection Confidentiality Notice



US ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

Form Approved
OMB No. 2070-0007
Expires 3-31-88

TOXIC SUBSTANCES CONTROL ACT

TSCA INSPECTION CONFIDENTIALITY NOTICE

1. INVESTIGATION IDENTIFICATION			2. FIRM NAME	
DATE 03-29-11	INSPECTOR NO. 4201	DAILY SEQ. NO. 001	Fermilab / DOE	
3. INSPECTOR NAME Jim Clark			4. FIRM ADDRESS P.O. Box 2000 Batavia IL 60510	
5. INSPECTOR ADDRESS 9511 Harrison St Des Plaines, IL 60016 1563			6. CHIEF EXECUTIVE OFFICER NAME Michael J. Weis	
			7. TITLE Site Manager	

TO ASSERT A CONFIDENTIAL BUSINESS INFORMATION CLAIM

It is possible that EPA will receive public requests for release of the information obtained during inspection of the facility above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 USC 552; EPA regulations issued thereunder, 40 CFR Part 2; and the Toxic Substances Control Act (TSCA), Section 14. EPA is required to make inspection data available in response to FOIA requests unless the Administrator of the Agency determines that the data contain information entitled to confidential treatment or may be withheld from release under other exceptions of FOIA.

Any or all the information collected by EPA during the inspection may be claimed confidential if it relates to trade secrets or commercial or financial matters that you consider to be confidential business information. If you assert a CBI claim, EPA will disclose the information only to the extent, and by means of the procedures set forth in the regulations (cited above) governing EPA's treatment of confidential business information. Among other things, the regulations require that EPA notify you in advance of publicly disclosing any information you have claimed as confidential business information.

A confidential business information (CBI) claim may be asserted at any time. You may assert a CBI claim prior to, during, or after the information is collected. The declaration form was developed by the Agency to assist you in asserting a CBI claim. If it is more convenient for you to assert a CBI claim on your own stationery or by marking the individual documents or samples "TSCA confidential business information," it is not necessary for you to use this form. The inspector will be glad to answer any questions you may have regarding the Agency's CBI procedures.

While you may claim any collected information or sample as confidential business information, such claims are unlikely to be upheld if they are challenged unless the information meets the following criteria:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

2. The information is not, and has not been, reasonably obtainable without your company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on showing of special need in a judicial or quasi-judicial proceeding).
3. The information is not publicly available elsewhere.
4. Disclosure of the information would cause substantial harm to your company's competitive position.

At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time, you may make claims that some or all of the information is confidential business information.

If you are not authorized by your company to assert a CBI claim, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials to the Chief Executive Officer of your firm within 2 days of this date. The Chief Executive Officer must return a statement specifying any information which should receive confidential treatment.

The statement from the Chief Executive Officer should be addressed to:

Emma Avant, DCO
US EPA Region V
77 W. Jackson Blvd
Chicago IL 60604

and mailed by registered, return-receipt requested mail within 7 calendar days of receipt of this Notice. Claims may be made any time after the inspection, but inspection data will not be entered into the special security system for TSCA confidential business information until an official confidentiality claim is made. The data will be handled under the agency's routine security system unless and until a claim is made.

TO BE COMPLETED BY FACILITY OFFICIAL RECEIVING THIS NOTICE:		If there is no one on the premises of the facility who is authorized to make business confidentiality claims for the firm, a copy of this Notice and other inspection materials will be sent to the company's chief executive officer. If there is another company official who should also receive this information, please designate below.	
I have received and read the notice			
SIGNATURE 	NAME	TITLE	
Rick Hersemann			
TITLE Physical Scientist	DATE SIGNED 3/29/11	ADDRESS	

Attachment 3

Receipt for Samples and Documents



United States
 Environmental Protection Agency
 Washington, DC 20460

**TOXIC SUBSTANCES CONTROL ACT
 RECEIPT FOR SAMPLES AND DOCUMENTS**

*Public reporting burden for this collection of information is estimated to average approximately 5 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C., 20460, and to the Office of Management and Budget, Paperwork Reduction Project (2070-0007), Washington, D.C., 20503

1. INVESTIGATION IDENTIFICATION			2. FIRM NAME	
DATE 03-29-11	INSPECTOR NO. 4201	DAILY SEQ. NO. 001	Fermilab / DOE	
3. INSPECTOR ADDRESS 9511 Harrison St. Des Plaines IL 60016.			4. FIRM ADDRESS P.O. Box 2000 Batavia IL 60510	

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Toxic Substances Control Act.

RECEIPT OF DOCUMENT(S) AND/OR SAMPLE(S) DESCRIBED IS HEREBY ACKNOWLEDGED:

NO.	DESCRIPTION
one	"Query Results 3" - listing of PCB Ballasts & shipped in the last 3 years. other items
one	Illinois manifest #003942192
one	Illinois manifest 005172203 & #001154396
one	Illinois manifest 003034990 & 8 pages total
one	certificate of destruction dated 8/16/2010
one	IL Manifest 005174276 & attachments
Four (4)	photos
one	Photo of PCB storage area
to twenty	Sixteen pages total

OPTIONAL:

DUPLICATE OR SPLIT SAMPLES: REQUESTED AND PROVIDED NOT REQUESTED

INSPECTOR SIGNATURE <i>John Clark</i>		RECIPIENT SIGNATURE <i>Rick Hersemann</i>	
NAME John Clark		NAME Rick Hersemann	
TITLE EPA III	DATE SIGNED 03-29-11	TITLE Physical Scientist	DATE SIGNED 3/29/11

Attachment 4
Disposal Records

Query Results 3

3/29/201

Date Shipped	WstDsc	Manifest#
05/28/2008	PCB BALLASTS + SMALL CAPACITORS	002061618
06/08/2009	PCB BALLASTS + SMALL CAPACITORS	002623799
12/21/2009	PCB BALLASTS + SMALL CAPACITORS	003069507
05/19/2010	PCB BALLASTS	005174276
07/12/2010	PCB BALLASTS + SMALL CAPACITORS	003034990
10/04/2010	PCB BALLAST	005172203
12/20/2010	PCB BALLASTS + CAPACITORS	003942192
	PCB CONTAMINATED DIALA OIL	003942192



Form designed for use on elite (12-pitch) typewriter.

772354687 001

SEP 24, 2009

Form Approved. OMB No. 2050-0039

HAZARDOUS WASTE MANIFEST	1. Generator ID Number IL6890030046	2. Page# of 1	3. Emergency Response Phone (800) 483-3718	4. Manifest Tracking Number 002623799 FLE
--------------------------	--	------------------	---	--

Generator's Name and Mailing Address Tami Hat Acce Laboratory Wilson Road P.O. Box 500 Batavia, IL 60610 Generator's Phone: (630) 840-4498 Attn: Dave Harkin MS-363	Generator's Site Address (if different than mailing address) SAME
---	--

6. Transporter 1 Company Name Clean Harbors Environmental Services Inc	U.S. EPA ID Number WAD039322250
---	------------------------------------

7. Transporter 2 Company Name TRIAS TRANSPORT TX	U.S. EPA ID Number OKD981588791
---	------------------------------------

8. Designated Facility Name and Site Address Clean Harbors Deer Park LP 2027 Independence Parkway South La Porte, TX 77571 Facility's Phone: (281) 930-2300	U.S. EPA ID Number TXD055141373
---	------------------------------------

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
X	1. POLYCHLORINATED BIPHENYLS LIQUID (PCB) S, PG III (RQ)	001	DM	00338	K			00T54091
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
ERG5171 out of service 10/15/08
T# 5133

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offor's Printed/Typed Name Greg Thompson	Signature <i>Greg Thompson</i>	Month 10	Day 08	Year 09
---	-----------------------------------	-------------	-----------	------------

16. International Shipments Import to U.S. Export from U.S. Port of entry/exit: Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials				
Transporter 1 Printed/Typed Name ROBERT CHEATHAM	Signature <i>Robert Cheatham</i>	Month 06	Day 08	Year 09
Transporter 2 Printed/Typed Name SIAI - Bismu	Signature <i>SIAI</i>	Month 06	Day 17	Year 09

18. Discrepancy
18a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H040	2.	3.	4.
---------	----	----	----

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
--------------------	-----------	-------	-----	------

GENERATOR
INTL
TRANSPORTER
DESIGNATED FACILITY



Clean Harbors Deer Park LP
2027 Independence Parkway South
La Porte TX, 77571
TXD055141378
(281) 930-2300

CERTIFICATE OF DISPOSAL

Generator Facility Name: Fermi Natl Accel Laboratory
Generator Address: Wilson Road
Batavia, IL, 60510

Sales Order#: C72354658
Date Received: 6/19/2009

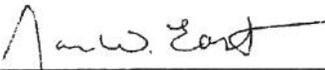
Generator Contact Name:

Generator EPA ID: IL6890030046

Load #: 313044
Manifest #: 002623799FLE

Original CH ID #	Date Removed From Service	Unit Type	Unique ID/ Serial #	Material Description	Disposal Date	Method of Disposal	Disposal Facility
18503442	10/15/2008	DM	08016CS	PCB Ballasts For Incineration	6/24/2009	Incineration	Deer Park, TX Facility

UNDER CIVIL AND CRIMINAL PENALTIES OF LAW FOR THE MAKING OR SUBMISSION OF FALSE OR FRAUDULENT STATEMENTS OR REPRESENTATIONS (18 U.S.C. 1001 AND 15 U.S.C. 2615), I CERTIFY THAT THE INFORMATION CONTAINED IN OR ACCOMPANYING THIS DOCUMENT IS TRUE, ACCURATE, AND COMPLETE. AS TO THE IDENTIFIED SECTION(S) OF THIS DOCUMENT FOR WHICH I CANNOT PERSONALLY VERIFY TRUTH AND ACCURACY, I CERTIFY AS THE COMPANY OFFICIAL HAVING SUPERVISORY RESPONSIBILITY FOR THE PERSONS WHO, ACTING UNDER MY DIRECT INSTRUCTIONS, MADE THE VERIFICATION THAT THIS INFORMATION IS TRUE, ACCURATE, AND COMPLETE.



Authorized Agent

Thursday, July 09, 2009

Date



Clean Harbors Environmental Services, Inc.
4879 Spring Grove Avenue
Cincinnati, OH 45232
513.681.5738
Fax 513.681.7523
www.cleanharbors.com

July 31, 2008

Fermi National Accelerator Laboratory
Wilson Road
Batavia, IL 60510

ATTN: Compliance Officer

Please be advised of the following manifest discrepancy:

Manifest #: 002061618FLE
Manifest Date: 5/28/08

These changes have been made with prior generator approval via Clean Harbors Environmental Services sales and customer service staff and this should serve as an official notification of the manifest discrepancy. The changes are as follows:

Line 3: OSD 11/05/07

Attached is a copy of 001836730FLE, if you should have any questions regarding this discrepancy, please contact your local account representative or customer service representative.

Sincerely,

A handwritten signature in black ink that reads "Jeff Lineback". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jeff Lineback
Compliance Specialist
Spring Grove Resource Recovery

CC:
File

on elite (12-pitch) typewriter.)

Generator ID Number
8890030018

2. Page 1 of 1

3. Emergency Response Phone
(900) 483-3718

4. Manifest Tracking Number
002061618 FLE

Generator's Site Address (if different than mailing address)

Mailing Address
Laboratory
60610

Attn: Dave Harkin MS-363

5. Transporter 1 Company Name
Clean Harbors Environmental Services Inc

U.S. EPA ID Number
MAD030322250

6. Transporter 2 Company Name
Dart Trucking Company INC

U.S. EPA ID Number
OH000978587

8. Designated Facility Name and Site Address
Spring Grove Resource Recovery Inc
4879 Spring Grove Avenue
Cincinnati, OH, 45232
Facility's Phone: (513) 881-5738

U.S. EPA ID Number
OH0000918029

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
X	1. UN3028, BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE SOLID 8, PG III, (UNIVERSAL WASTE)	001	DF	0206	P	NONE	
X	2. 1PQ, NA30??, HAZARDOUS WASTE, SOLID, H.O.S., (RAGS TAPE PLASTIC PPE), 9, PG III (DQ00)	003	DF	0123	P	U03	
X	3. RQ, UN2315 POLYCHLORINATED BIPHENYLS, LIQUID, (PCB) 9, PG III (RQ)	001	DM	0181	K	NONE	
	4.						

14. Special Handling Instructions and Additional Information
 1. 751236 1X30 ER:G#151
 2. 751231 ER:G#171
 3. 751236 ER:G#171
 T # 367239
 3XSS
 1X30
 OUT OF SERVICE: 11/5/08

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offoror's Printed/Typed Name: Greg Thompson
 Signature: [Signature]
 Month Day Year: 05 28 08

INTL
TRANSPORTER

16. International Shipments Import to U.S. Export from U.S.
 Port of entry/exit: _____
 Date leaving U.S.: _____

17. Transporter Acknowledgment of Receipt of Materials
 Transporter signature (for exports only): _____
 Transporter 1 Printed/Typed Name: ROBERT CHATHAM Signature: [Signature] Month Day Year: 05 28 08
 Transporter 2 Printed/Typed Name: Steve King Signature: [Signature] Month Day Year: 05 28 08

18. Discrepancy
 18a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection
Line 3 OSD 11/05/07
 Manifest Reference Number: _____ U.S. EPA ID Number: _____

DESIGNATED FACILITY

18b. Alternate Facility (or Generator)
 Facility's Phone: _____
 18c. Signature of Alternate Facility (or Generator): _____
 Month Day Year: _____

19. Signature of Generator (or Offeror) and Date
 1. _____ 2. _____ 3. _____ 4. _____
 Month Day Year: _____

20. Signature of Designated Facility (or Generator) and Date
 Signature: _____
 Month Day Year: _____

Printed for use on elite (12-pitch) typewriter.

1. Generator ID Number: IL689003011

2. Page 1 of 1

3. Emergency Response Phone: (708) 241-1000

4. Manifest Tracking Number: 005174276 JJK

Name and Mailing Address: DEPARTMENT OF PUBLIC HEALTH, BOX 500, MANTUA, ILLINOIS 60545

Generator's Site Address (if different than mailing address): DEPARTMENT OF PUBLIC HEALTH LABORATORY, 3100 N. STATE ST., GAITHERSBURG, ILLINOIS 60525

Generator's Phone: (708) 241-1000

U.S. EPA ID Number: ILR00011

Transporter 1 Company Name: ENWASTE

U.S. EPA ID Number: ILR00011

Transporter 2 Company Name: CLEAN HARBORS ENVIRONMENTAL SERVICES

U.S. EPA ID Number: ILR00011

Designated Facility Name and Site Address: CLEAN HARBORS CRASSY ROAD, 3 MILES EAST OF VILLIERS, GRANTSVILLE, ILLINOIS

U.S. EPA ID Number: ILR00011

Facility's Phone: (708) 241-1000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type			RCF		
1.	RD, UN3432, POLYMER, SOLID, 9.2, PG III	13	DR	1551	KG			
2.								
3.								
4.								

14. Special Handling Instructions and Additional Information: OUT OF SERVICE DATA (708) 241-1000

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offoror's Printed/Typed Name: David Hoehn

Signature: [Signature]

Month Day Year: 5 19 10

16. International Shipments: Import to U.S. Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: THOMAS CONNELL

Signature: [Signature]

Month Day Year: 05 19 10

Transporter 2 Printed/Typed Name: [Name]

Signature: [Signature]

Month Day Year: 5 19 10

18. Discrepancy

18a. Discrepancy Indication Space: Quantity Type Residue Partial Rejection Full Rejection

Manifest Reference Number: U.S. EPA ID Number:

18b. Alternate Facility (or Generator): U.S. EPA ID Number:

Facility's Phone: Month Day Year:

18c. Signature of Alternate Facility (or Generator): Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. 1002 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Signature: [Signature]

Month Day Year: 10 13 10

GENERATOR

TRANSPORTER INTL

DESIGNATED FACILITY



Hazardous Waste Storage Facility

Destination Facility Confirmation

Receipt of PCB Waste Shipped from Fermilab

Receipt confirmation is required when using an independent hauler to transport PCB waste from Fermilab to a commercial storage or disposal site. Confirmation is required by the close of business on the day after receipt of the signed manifest from the destination facility.

Date of telephone call: 6/30/10 Call initiated by: Dave Hockin
Phone #: 435-884-8900 Call received by: Wendy Riddle

Destination Facility:

Name: Clean Harbors Brass Mountain LLC
Street: 3 miles East 7 miles North of Knols
City: Grantsville
State: UT Zip Code: 84029
USEPA Facility ID#: UTD991301748

Did the person called confirm that all waste described (below) was received at the destination facility?
YES NO

If yes, file this completed form with the shipping papers.

If No, contact the independent transporter to determine the disposition of the PCB waste. If confirmation of receipt of the waste at an EPA approved facility is not completed within 45 days of the shipment date, complete and submit an exception report to USEPA Region V Administrator.

Manifest #: 005174276
Waste Description: PCB Ballasts
Quantity shipped: 1551 kg (13 drums)
Shipment Date: 5/19/10



Clean Harbors Grassy Mountain LLC
3 Miles East 7 Miles North of Knolls
Grantsville UT, 84029
UTD991301748
(801) 323-8900

CERTIFICATE OF DISPOSAL

Generator Facility Name: Fermi National Accelerator Laboratory Sales Order#: D72897080
Generator Address: Kirk Road and Pine Date Received: 6/30/2010
Batavia, IL, 60510
Generator Contact Name:

Generator EPA ID: IL6890030046 Load #: 10003408
Manifest #: 005174276JJK

Original CH ID #	Date Removed From Service	Unit Type	Serial # / Customer ID	Material Description	Disposal Date	Method of Disposal	Disposal Facility
21306526	5/19/2010	DM	01 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306527	5/19/2010	DM	02 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306528	5/19/2010	DM	03 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306529	5/19/2010	DM	04 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306530	5/19/2010	DM	05 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306531	5/19/2010	DM	06 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306532	5/19/2010	DM	07 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306533	5/19/2010	DM	08 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306534	5/19/2010	DM	09 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306535	5/19/2010	DM	10 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306536	5/19/2010	DM	11 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306537	5/19/2010	DM	12 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility
21306538	5/19/2010	DM	13 /	PCB Ballasts Or Capacitors For Landfill	7/14/2010	Landfill	Grassy Mountain, UT Facility

Under Civil and Criminal Penalties of Law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Shane B. Whitney

Authorized Agent

Monday, July 26, 2010

Date



FERMILAB

Time 0855 IN 05/19/10

Hazardous Waste Storage Facility

FERMILAB

Time 1116 out 05/19/10

15940 LB

PCB Continuation Sheet

Manifest # 005174276

Continuation Sheet Page 1 of 2

Unique ID #	Date Removed From Service For Disposal	Container Type	Description of PCB Waste	Total Weight (Kg)	PCB Waste Code
01	5/19/10	Steel Drum	PCB Ballast	119 Est	PCB 1
02	5/19/10	Steel Drum	PCB Ballast	119	PCB 1 PCB 1
03	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
04	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
05	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
06	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
07	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
08	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
09	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
10	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
11	5/19/10	Steel Drum	PCB Ballast	119	PCB 1
12	5/19/10	Steel Drum	PCB Ballast	119 ↓	PCB 1

Fermilab

MATERIAL MOVE REQUEST NO. M 146744

Please fill out form completely

REQUESTED BY 9/2010 Dave Hockin	ID# 06020N	MS# 363	PHONE EXT. 4498	BUDGET CODE 70/ 70.4.4
LOCATION OF MATERIALS BLDG OR SITE #	DIMENSIONS		APPROXIMATE WEIGHT	

Special Instructions for Requester/Originator: The requester is responsible for insuring that all Division/Section requirements for offsite Material Move Request Forms are met. Requirements may be obtained from Division/Section ES&H Offices. The Requester must arrange with authorized personnel to complete any required radiation check. Questions concerning the identification of other hazards should be referred to your Division/Section ES&H Office or the Shipping Dept. at x3470. (Hazardous material shipping requirements apply to on-site transfers.)

Contains Radioactive or Hazardous Material? Yes No
 If Yes, Check Hazard Type(s) Below: Radioactive; Nature & Extent
 Answered By (PRINT) Dave Hockin ID No. 06020N Signature *[Signature]*

Authorized Surveyor (PRINT) Greg Thompson ID No. 09671N Signature *[Signature]* Survey Instrument / No. Bicron Analyst # 54

- Explosive Flammable Gas Non-Flammable Gas/ Cryogen Flammable Liquid Flammable Solid
 Oxidizer Poison/ Infection Corrosive Other Class 9

PO LINE ITEM #	QUANTITY	DESCRIPTION	PROPERTY NO	SERIAL NO.
	13 Drums	PCB Light Ballasts for Disposal		
		RQ, UN3432, Polychlorinated biphenyls, solid, 9, PGIII		
	7 Drums	Mercury containing lamps for reclamation		
		Non DOT Hazardous Material		

When Material is returned to Fermilab, deliver to:
 Name _____ Ext. _____ Location _____

HIP TO ENWASTE PURCHASE ORDER NO. Num. File
 ADDRESS 26137 S. Ridgeland Ave. RETURN AUTHORIZATION NO. _____
(Do not use P.O. Box No.)
 CITY Monee PROCUREMENT APPROVAL _____
(Shipments involving Purchase Orders require Procurement approval)
 STATE & ZIP CODE IL 60449 LOAN OR EXPERIMENT NO. _____
 ATTENTION _____ DATE REQUIRED AT DESTINATION _____
(Required Information)
 AREA CODE TELEPHONE NO. 708-534-5100 MODE OF SHIPMENT: PREPAID COLLECT

Picked up by vendor on 5/19/2010 x *[Signature]* ENWASTE, INC
 REASON FOR SHIPMENT: IN WARRANTY REPAIR OUT OF WARRANTY REPAIR FABRICATION LOAN RETURN OF LOAN
 RETURN FOR CREDIT RETURN FOR REPLACEMENT OTHER NOTES _____

type. (Form designed for use on elite (12-pitch) typewriter.)

1287700001

90 DPW 8/4/2010

1078401
Form Approved. OMB No. 2050-0039

FORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number 1L6890630046	2. Page 1 of 2	3. Emergency Response Phone 800-483-3738	4. Manifest Tracking Number 003034900 FLE		
5. Generator's Name and Mailing Address Fermi Natl Acct Laboratory Wilson Road Batavia, IL 60510 Generator's Phone: (830) 840-1408				Generator's Site Address (if different than mailing address) SAME			
6. Transporter 1 Company Name Clean Harbors Environmental Services Inc				U.S. EPA ID Number MAD03932250			
7. Transporter 2 Company Name CLEAN HARBORS ENVIRONMENTAL SERVICES INC				U.S. EPA ID Number MAD03932250			
8. Designated Facility Name and Site Address Clean Harbors Deer Park, LLC 2027 Independence Parkway South La Porte, TX 77571 Facility's Phone: (281) 930-2300				U.S. EPA ID Number TXD055141278			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
X	1. RG (M2315. POLYCHLORINATED BIPHENYLS LIQUID (PCB), 9. PCB (RG), (OSD 1/20/2010)	001	DM	00161	K	D014061	
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 1.751336 ERG#111 LX58							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name GREG THOMPSON				Signature <i>Greg Thompson</i>		Month Day Year 07 12 10	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name MEGHAN PETERS				Signature <i>Meghan Peters</i>		Month Day Year 07 12 10	
Transporter 2 Printed/Typed Name KELLY AIRD				Signature <i>Kelly Aird</i>		Month Day Year 07 12 10	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____							
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H040		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name				Signature		Month Day Year	

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY



Clean Harbors Deer Park, LLC
2027 Independence Parkway South
La Porte TX, 77571
TXD055141378
(281) 930-2300

CERTIFICATE OF DISPOSAL

Generator Facility Name: Fermi Natl Accel Laboratory
Generator Address: Wilson Road
Batavia, IL, 60510
Generator Contact Name:

Sales Order#: C72977823
Date Received: 8/16/2010

Generator EPA ID: IL6890030046

Load #: 324410
Manifest #: 003034990FLE

Original CH ID #	Date Removed From Service	Unit Type	Serial # / Customer ID	Material Description	Disposal Date	Method of Disposal	Disposal Facility
21652564	1/20/2010	DM	21652564 /	PCB Ballasts For Incineration	8/18/2010	Incineration	Deer Park, TX Facility

Under Civil and Criminal Penalties of Law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Authorized Agent

Tuesday, August 24, 2010

Date

1563 1086634

Print or type. (Form designed for use on elite (12-pitch) typewriter.) C73255270-001 SCPPW 10/26/2010 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number IL 6990030046	2. Page 1 of 2	3. Emergency Response Phone (800) 493-3719	4. Manifest Tracking Number 003942192 FLE
----------------------------------	---	----------------	---	--

5. Generator's Name and Mailing Address
Fermi Natl Accel Laboratory
Wilson Road
Batavia, IL 60510
Generator's Phone: (830) 840-4499 ATTN: D. HOCKIN ms-363

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
Clean Harbors Environmental Services Inc
U.S. EPA ID Number
MAD038322250

7. Transporter 2 Company Name
Robert D Wood Inc
U.S. EPA ID Number
AL0067138891

8. Designated Facility Name and Site Address
Clean Harbors Deer Park, LLC
2027 Independence Parkway South
Deer Park, TX 77871
Facility's Phone: 281-930-2300
U.S. EPA ID Number
TXD055141376

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes
		No.	Type			
X	1. UN2315. POLYCHLORINATED BIPHENYLS. LIQUID. 9. PG II. DOT-SP-13937	001	CF	00007 13	K EB	QWTS2971
X	2. RQ. UN3432. POLYCHLORINATED BIPHENYLS. SOLID, (PCB). 9. PG III (RO)	002	UM	00242	X	QWTS4051
	3.					
	4.					

14. Special Handling Instructions and Additional Information
 1. LCHSI ERG#171 1X10
 2. 751236 ERG#171 2X20
 OUT OF SERVICE DATE LINE # 1
 11-02-10. LINE #2 6-25-10
 10-5-10.
 TRUCK # 5391

15. GENERATOR/SOFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/pleared, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offor's Printed/Typed Name
David Hockin
Signature
[Signature]
Month Day Year
12 20 10

16. International Shipments
 Import to U.S.
 Export from U.S.
 Port of entry/exit:
 Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name
Michael L Fleming
Signature
[Signature]
Month Day Year
12 20 10

Transporter 2 Printed/Typed Name
GEORGE C. McCLUNG
Signature
[Signature]
Month Day Year
12 28 10

18. Discrepancy
 18a. Discrepancy Indication Specie
 Quantity
 Type
 Residue
 Partial Rejection
 Full Rejection
 Per David Hockin the above quantity has been changed 1-14-11 EB
 Manifest Reference Number:
 U.S. EPA ID Number

18b. Alternate Facility (or Generator)
 Facility's Phone:
 18c. Signature of Alternate Facility (or Generator)
 Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
 1. H040
 2. H040
 3.
 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
 Printed/Typed Name
Terri Stamer
Signature
[Signature]
Month Day Year
12 20 10

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

GENERATOR
TRANSPORTER INTL
DESIGNATED FACILITY

Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping.

HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number 003942192 FLE
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Generator's Name and Mailing Address	Generator's Site Address (if different than mailing address)
--------------------------------------	--

Generator's Phone:	U.S. EPA ID Number
6. Transporter 1 Company Name	U.S. EPA ID Number

7. Transporter 2 Company Name	U.S. EPA ID Number
-------------------------------	--------------------

8. Designated Facility Name and Site Address	U.S. EPA ID Number
--	--------------------

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
1.	10050LP (100200) 10050LP ✓			13		
2.	10020CP					
3.						
4.						

14. Special Handling Instructions and Additional Information

DOT 304+P
H-22, 10, LINF 2
K-5-10

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offero's Printed/Typed Name	Signature	Month	Day	Year
---	-----------	-------	-----	------

INT'L

16. International Shipments Import to U.S. Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DISCREPANCY

18. Discrepancy

18a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

Manifest Reference Number: _____

DESIGNATED FACILITY

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
----	----	----	----

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
--------------------	-----------	-------	-----	------



Clean Harbors Container Packing List

10050LP

Job # _____ Manifest _____

Container Size: 5G 16G 30G 55G Other: 20 CF
 Container Type: Poly Metal Fiber Other: _____

Container ID#
Disposal Code <u>LCHSII</u>

DOT Shipping Description: UN2315 POLYCHLORINATED BIPHENYLS, LIQUID 9, PG II

No.	Chemical Name (No trade name)	Quantity	UOM	L/S/G	Waste Code(s)
1	Oil				
2	Oil / Contaminated w/ PCB	1x	5gal	L	OUT OF SERVICE DATE <u>11-2-10</u>
3					
4					
5	DOT-SP-13937				
6					
7	1026201				
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Absorbent: Vermiculite Polymer-Based Other: _____

NOTE TO THE USER: The above listing is an accurate description of the content of this drum and that it contains no radioactive, explosive or shock sensitive materials.

Designed for use on elite (12-pitch) typewriter.

7-2009-001 EPA FORM 10-20 2009

Form Approved. OMB No. 2050-0039

1. Generator ID Number: IL6880080046
 2. Page 1 of 1
 3. Emergency Response Phone: (800) 424-3719
 4. Manifest Tracking Number: 003009507 FILE

Generator's Name and Mailing Address: **Form Heli Aerial Laboratory**
 Wilson Road
 Baraboo, IL 60910
 Generator's Phone: (800) 240-4458
 Generator's Site Address (if different than mailing address): **Attn: Dave Harkin MS-363** SAME

6. Transporter 1 Company Name: **Clean Harbors Environmental Services Inc.**
 U.S. EPA ID Number: **MA0039322250**

7. Transporter 2 Company Name: **Clean Harbors Environmental Services Inc.**
 U.S. EPA ID Number: **MA0039322250**
 8. Designated Facility Name and Site Address: **Clean Harbors Deer Park LP**
 2027 Independence Parkway
 La Porte, TX 77571
 Facility's Phone: (281) 330-2000
 U.S. EPA ID Number: **TX0035414111**

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
x	1. RD UN2315 POLYCHLORINATED BIPHENYLENE LIQUID SOLID 9. PG III (RQ)	004	DM	00869	K	201219
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information:
 See a Hach aerial permission 12-23-09
 DATE OF SERVICE DATE 09-16-09 (11 MONTHS)
 WY. 10A TRUCK # 5284. SEE ATTACHED CONTINUATION SHEET FOR DETAILS

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeree's Printed/Typed Name: **Chris Thompson**
 Signature: *Chris Thompson*
 Month Day Year: **12 21 09**

16. International Shipments: Import to U.S. Export from U.S.
 Transporter signature (for exports only): *Mark Cheatham*
 Port of entry/exit: _____
 Date leaving U.S.: _____

17. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name: **Mark Cheatham**
 Signature: *Mark Cheatham*
 Month Day Year: **12 21 09**
 Transporter 2 Printed/Typed Name: **Jan Foster**
 Signature: *Jan Foster*
 Month Day Year: **12 28 09**

18. Discrepancy
 18a. Discrepancy Indication Space: Quantity Type Residue Partial Rejection Full Rejection

18b. Alternate Facility (or Generator)
 Manifest Reference Number: _____
 U.S. EPA ID Number: _____
 Facility's Phone: _____

18c. Signature of Alternate Facility (or Generator)
 Signature: _____
 Month Day Year: _____

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
 1. **1040** 2. _____ 3. _____ 4. _____

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
 Printed/Typed Name: **Mark Cheatham**
 Signature: *Mark Cheatham*
 Month Day Year: _____

GENERATOR
 TRANSPORTER INTL



Clean Harbors Deer Park LP
2027 Independence Parkway South
La Porte TX, 77571
TXD055141378
(281) 930-2300

CERTIFICATE OF DISPOSAL

Generator Facility Name: Fermi Natl Accel Laboratory
Generator Address: Wilson Road
Batavia, IL, 60510
Generator Contact Name:

Sales Order#: C72657542
Date Received: 1/19/2010

Generator EPA ID: IL6890030046

Load #: 318716
Manifest #: 003069507FLE

Original CH ID #	Date Removed From Service	Unit Type	Serial # / Customer ID	Material Description	Disposal Date	Method of Disposal	Disposal Facility
20021066	11/16/2009	DM	0901 /	Capacitor For Incineration	1/26/2010	Incineration	Deer Park, TX Facility
20021067	11/20/2009	DM	0902 /	Capacitor For Incineration	1/26/2010	Incineration	Deer Park, TX Facility
20021068	11/19/2009	DM	0903 /	Capacitor For Incineration	1/26/2010	Incineration	Deer Park, TX Facility
20021069	9/16/2009	DM	0904 /	Capacitor For Incineration	1/26/2010	Incineration	Deer Park, TX Facility

Under Civil and Criminal Penalties of Law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Authorized Agent

Wednesday, January 27, 2010

Date

Attachment 5

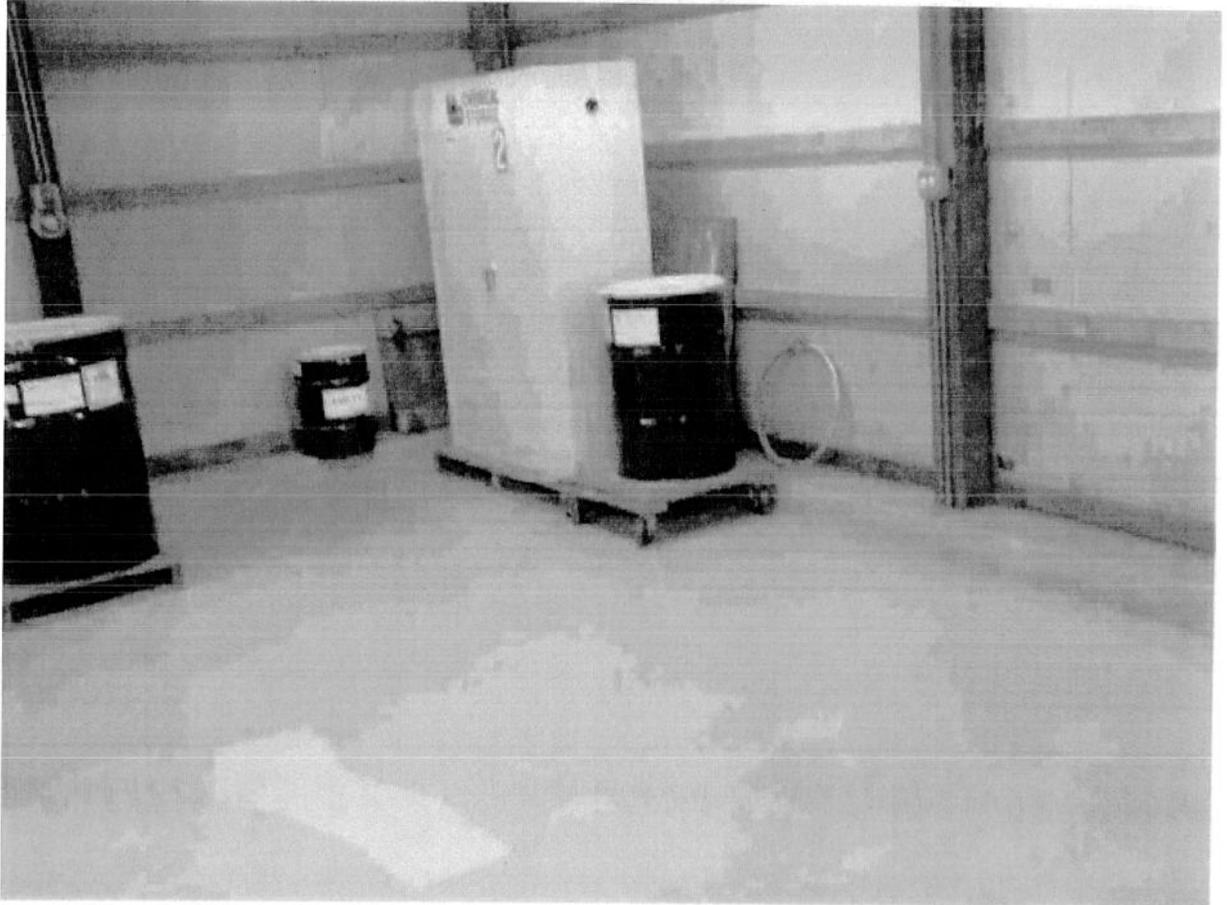
Photographs



View of Site 55 where PCB waste is stored prior to disposal



View of entrance showing M_e sticker affixed



View of PCB waste in storage area having curbs and no floor drain



Close up of PCB Container in storage area at Site 55

