

**APPENDIX A - Revised: FINDINGS AND ACTIONS BY COMPANY FACILITY
UPDATED AS OF MAY 31, 2005**

FACILITIES INSPECTED DURING SARNIA SWEEP

- Air Liquide Canada Inc. (Gas plant)
- Air Products Canada Ltd. (Gas plant)
- Basell Canada Inc. (Chemical plant)
- Bayer Inc. (Chemical plant)
- BP Canada Energy Company (Petroleum refinery/chemical plant)
- Cabot Canada Ltd. (Chemical plant)
- Chinook Corporation (Chemical plant)
- Dow Chemical Canada Inc. (Chemical plant)
- Enbridge Pipelines Inc. (Natural gas)
- Entropex (Plastic recycler)
- Ethyl Canada (Petroleum refinery/chemical plant)
- Fibrex Insulations Inc. (Chemical plant)
- ICI Canada Inc. (Wastewater Treatment Plant)
- Imperial Oil Ltd. (Petroleum refinery/chemical plant)
- Invista (Canada) Company (Chemical plant)
- Katoen Natie Canada Company (Plastic recycler)
- Lanxess Inc. (2 Chemical plants and 1 landfill site)
- NOVA Chemicals (Canada) Ltd. (1 Chemical plant & 1 Petroleum refinery plant)
- NOVA Chemicals Corporation (3 Chemical plants)
- Ontario Power Generation (Thermal generating station)
- Praxair Canada Inc. (2 Gas plants)
- Royal Polymers Limited (Chemical plant)
- SCU Nitrogen Inc. (Fertilizer plant)
- Shell Canada Products Ltd. (Petroleum refinery)
- Suncor Energy Products Inc. (Petroleum refinery/chemical plant)
- Terra International (Canada) Inc. (Chemical plant, fertilizer)
- TransAlta Energy Corporation (3 Co-generation electric stations)

This updated appendix provides a brief description of each facility inspected as part of the Environmental SWAT Team's inspection sweep in the Sarnia area, as well as examples of its sound business practices and related inspection findings. An aerial photograph (also referred to as an "orthophoto") of each facility was provided in the original version of this text. These orthophotos provide detailed visual information used to plan for, and execute, the inspections. Where the orthophoto covers an area or facility that is not part of the inspection (e.g., owned by another company), a yellow line identifies the facility that is the subject of the inspection.

Note: An "orthophoto" is an aerial image that has undergone a process of "orthorectification" to correct for the effects of camera lens tip and tilt, image scale variations, etc., giving the user the positional accuracy of a map.

AIR LIQUIDE CANADA INC.

Site Location: 60 Bickford Line, Courtright

Inspection Report: 1-9UST

Type of Facility: Gas plant

Operations: Receives carbon dioxide gas from Terra International through an underground pipeline and condenses it into liquid carbon dioxide. Also receives cooling water from Terra International for use in its processes.

Associations: None identified.

Inspection Date: September 23, 2004

Sound Business Practices include:

- Company follows Effluent Monitoring and Effluent Limits regulations guidelines although not Effluent Monitoring and Effluent Limits regulated.

Issues of Concern:

- Generates solvent waste, but not registered as a generator of solvent wastes;
- Solvent wastes mixed with waste oils;
- Waste stored longer than 90 days without notifying MOE, as required;
- Certificates of Approval issued to company do not bear company name.

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Register as a generator of solvent wastes with Environmental Monitoring and Reporting Branch;
- Show how it characterized solvent wastes;
- Cease blending waste solvents and waste oils.

Compliance Status: Completed

AIR PRODUCTS CANADA LTD.

Site Location: 20 Indian Road South, Sarnia

Inspection Report: 1-9ULU

Type of Facility: Gas plant

Operations: Receives hydrogen gas from Nova Chemicals in Corunna and condenses it into liquid hydrogen. Extracts methane gas, which is sent back to Nova Chemicals for use as fuel.

Associations: ISO 9001 and 9002 certified

Inspection Date: May 16 -18, 2004

Sound Business Practices include:

- Alarms that detect up to 5 ppm of contaminants in air (system shuts down if alarm tripped);
- Berms around waste tanks.

Issues of Concern:

- Fugitive emissions from pipes, including steam and nitrogen;
- Liquid underground waste stored longer than 90 days without notifying MOE, as required;
- Inadequate spill containment for the storage of waste oil drums.

Action: Provincial Officer Order served on July 13, 2004; requirements on company included:

- Characterize and dispose of liquid waste within contaminated area;
- Provide details and a plan for management of liquid waste;
- Apply to have current Certificate of Approval amended for address change.

Compliance Status: Completed

BASELL CANADA INC.

Site Location: 339 LaSalle Road, Corunna

Inspection Report: 1-9UAI

Type of Facility: Chemical plant

Operations: Makes isopropyl alcohol and polypropylene nibs.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA)

Inspection Date: May 3 -12, 2004

Sound Business Practices include:

- Closed loop cooling water system
- In-house technical evaluation of equipment on a regular basis

Issues of Concern:

- No Certificate of Approval for shipment of sewage to Shell Canada Products Ltd. for treatment;
- Several unapproved sources of emissions to air from laboratory fume hoods and welding garage;
- Emissions from a flare that exceed regulatory requirements during power outages;

Action: Provincial Officer Order served on July 13, 2004; requirements on company included:

- Submit contingency plan for power outages;
- Apply for Certificate of Approval for emission sources;
- Apply to have existing Certificate of Approval amended to include sewage treatment plant.

Compliance Status: Completed

BAYER INC.

(Formerly H.C. Starck Canada)

Site Location: 933 Vidal Street South, Sarnia

Inspection Report: 1-9UIO

Type of Facility: Chemical plant

Operations: Makes tungsten and nickel hydroxide.

Associations: Member of Canadian Chemical Producers' Association (CCPA)

Inspection Date: April 13 – July 8, 2004

Sound Business Practices: No observable examples

Issue of Concern:

- Unapproved Installation of three fume hoods in the Tungsten Lab.

Action: Provincial Officer Order served on August 31, 2004; requirements on the company included:

- Apply for new Certificate of Approval for fume hoods.

Compliance Status: Completed

BP CANADA ENERGY COMPANY

Site Location: 1182 Plank Road, Sarnia

Inspection Report: 1-9UB3

Type of Facility: Petroleum refinery/chemical plant

Operations: Refines natural gas Liquids (NGL) and makes petroleum products.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA), Member of Responsible Care (CCPA), ISO 14001 certified

Inspection Date: August 16 -20, 2004

Sound Business Practices include:

- Consolidating old Certificates of Approval;
- Dedicated on-site environmental staff;
- Developed spill management program;
- Formalized inspections of refinery equipment as per American Petroleum Institute (API).

Issues of Concern:

- No Certificate of Approval for several unapproved exhausts;
- Numerous manifesting errors and misclassification of wastes for shipping.

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Apply for Certificate of Approval for unapproved exhausts and any other unapproved sources of emissions to air;
- Evaluate characteristics of its wastes and/or file generator reports for wastes;
- Develop procedure to eliminate volume/weight errors on manifests.

Compliance Status: Completed

CABOT CANADA LTD.

Site Location: 800 Tashmoo Avenue, Sarnia

Inspection Report: 1-DQT9

Type of Facility: Chemical plant

Operations: Produces carbon black, primarily for reinforcing rubber goods, with the balance going into pigments and fillers for plastics, paints and inks.

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: February 24 – March 5, 2004

Sound Business Practices include:

- All process water directed to lagoon and treated through sand filter;
- Tank farm bermed;
- Environmental and health and safety manager on staff.

Issues of Concern:

- Many unapproved sources of emissions to air and other related violations;
- Unapproved equipment for handling wastes. Also, inaccurate drawings of sewer system, no emergency pumping system for effluent pumping station, failed to create required manual;
- Laboratory waste not characterized, registered or disposed of properly;
- Many waste sampling requirements not being followed;
- Questionable classification of wastes;
- No waste reduction plan created, no 2003 waste audit submitted;
- Never decommissioned as a PCB site after waste removed in 1999 following Director's Order in 1998;
- Spill contingency plans missing or inadequate.

Action: Provincial Officer Order served on April 8, 2004; requirements on company included:

- Characterize and improve management of subject waste manifests;
- Perform a source separation study and a waste audit, prepare waste reduction plans;
- Provide documentation for decommissioning a PCB site;
- Re-evaluate environmental Summary Dispersion Model;
- Undertake spill management and contingency planning;
- Apply for new Certificate of Approval (Air);
- Apply to have two existing Certificates of Approval (Air) amended.

Company requested review of Order on April 15, 2004. Director's Order served on April 27, 2004, to enforce original Order.

Compliance Status: Completed

CHINOOK CORPORATION LIMITED PARTNERSHIP

Site Location: 224 Holt Line West, St. Clair

Inspection Report: 1-9U3D

Type of Facility: Chemical plant

Operations: Makes chemicals used in water treatment, animal feed and pharmaceuticals, including methylamines, choline chloride and other choline-derived products.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA)

Inspection Date: July 12 -16, 2004

Sound Business Practices include:

- Dedicated environmental officer on site.
- Containment for all process and waste storage areas.

Issues of Concern:

- Several unapproved sources of emissions to air without Certificates of Approval;
- Inadequate laboratory analysis records;
- Incomplete registration of wastes;
- Potential contamination of area ground waters.

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Apply to have current Certificate of Approval amended to include equipment causing emissions to air;
- Comply with Ontario Regulation 347 about properly classifying waste and providing correct generator names on manifests;
- Submit plan for irrigation pond
- Comply with Certificate of Approval (sewage).

Compliance Status: In progress

DOW CHEMICAL CANADA INC.

Site Location: 1425 Vidal Street South, Sarnia

Inspection Report: 1-9U9Z

Type of Facility: Chemical plant

Operations: Makes polystyrene, polyethylene, epoxy resins, and polyols.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA), Chemical Valley Emergency Coordinating Organization (CVECO)

Inspection Date: August 30 – September 21, 2004

Sound Business Practices include:

- Electronic maintenance catalogue and reporting;
- Air monitoring for entire site (individual facilities treated on global emission scale);
- Information sharing between facilities globally.

Issues of Concern:

- Numerous Effluent Monitoring and Effluent Limits Regulations Issues under Ontario Regulation 63/95;
- Waste reduction plans under Ontario Regulation 102.
- Exceeded daily maximum PTTW amount on one single day.
- Ontario Regulation 347 waste characterization and procedural deviation from manuals.
- Certificate of Approval requiring amendments or new Certificates of Approval. Company currently has more than 100 valid Certificates of Approval.

Action: Provincial Officer Order served on April 12, 2005; requirements on company included:

- Have current Certificate of Approval for air amended;
- Comply with existing sewage Certificate of Approval;
- Properly characterize waste according to Generator Registration Guideline Manual.

Compliance Status: In progress

ENBRIDGE PIPELINES INC.

Site Location: 1010 Plank Road, Sarnia

Inspection Report: 1-9UTM

Type of Facility: Natural Gas

Operations: Operates (in Canada and the U.S.) the world's longest crude oil and liquids pipeline system.

Associations: None identified.

Inspection Date: August 26 - 27, 2004

Sound Business Practices include:

- Secondary containment for all storage tanks

Issues of Concern:

- Unregistered wastes being produced, collected and stored on site;
- Unapproved equipment discharging air emissions (welding fume hoods, crude oil storage tanks, sample room fume hood, back-up generator);
- Operations of industrial sewage works not fully covered by existing Certificate of Approval.

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Comply with Ontario Regulation 347 regarding subject waste;
- Apply to have Certificates of Approval (Air and Sewage) amended.

Company requested review of Order on January 27, 2005. Director's Order served on February 4, 2005, to enforce original Order. The company has appealed the Director's Order to the Environmental Review Tribunal.

Compliance Status: In progress

ENTROPEX

Site Location: 1271 Lougar Street, Sarnia

Inspection Report: 1-9U3X

Type of Facility: Plastic recycler

Operations: Accepts plastic from Sarnia's municipal recycling program and other sources for processing into pellets.

Associations: ISO 14001 certified

Inspection Date: April 27, 2004

Sound Business Practices include:

- On-site environmental health and safety officer with five dedicated staff.

Issues of Concern:

- Unapproved equipment alterations;
- Subject waste remaining on site for more than 90 days without proper reporting to the Ministry.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Comply with Ontario Regulation 127, by report, as required;
- Comply with Ontario Regulation 347 for storage reporting;
- Apply to have Certificate of Approval amended for emissions to air.

Compliance Status: Completed

ETHYL CANADA INC.

Site Location: 220 St. Clair Parkway, Moore

Inspection Report: 1-9UK5

Type of Facility: Petroleum refinery/chemical plant

Operations: Blends fuel and lubricant additives; produces diesel fuel octane improver.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association of Canada (CCPA); ISO 9002 certified

Inspection Date: May 31 – June 4, 2004

Sound Business Practices include:

- Secondary containment for storm water (kept on site until tested, all ditches gated on final discharge);
- Has applied for site-wide comprehensive Certificate of Approval for air and sewage conditions.

Issues of Concern:

- No Certificates of Approval for three vents on lab roof;
- Certificate of Approval for sewage works not amended to include on-site industrial laundry;
- Improper manifesting of hazardous wastes.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply to have existing Certificate of Approval amended to include equipment on lab roof;
- Apply to have existing Certificate of Approval amended to include on-site industrial laundry;
- Properly characterize waste according to Generator Registration Guideline Manual.

Company requested review of Order on September 7, 2004. Director's Order served on September 10, 2004, to enforce original Order.

Compliance Status: Completed

FIBREX INSULATIONS INC.

Site Location: 561 Scott Road, Sarnia

Inspection Report: 1-9UJN

Type of Facility: Chemical Plant

Operations: Makes rock wool board, pipe and blanket insulations, rock wool roof insulations, rock wool marine insulations.

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: May 10 -13, 2004

Sound Business Practices: No observable examples.

Issues of Concern:

- Fugitive emissions escaping to air through doors and vents;
- Inadequate containment of, and management plan for, hoses and piping from stormwater pond;
- No Certificate of Approval for on-site sewage works.
- Inadequate spill contingency and containment plans.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Reduce emissions to air and apply to have existing Certificate of Approval amended accordingly;
- Apply for two Certificates of Approval for sewage works (discharge of storm water and for process water pond);
- Prepare spill contingency and containment plans.

Compliance Status: Completed

ICI CANADA INC.

Site Location: 213 Bickford Line, Lambton Shores

Inspection Report: 1-9UM9

Type of Facility: Wastewater Treatment Plant

Operations: Treats industrial sewage.

Associations: None identified.

Inspection Date: April 13 – June 16, 2004

Sound Business Practices include:

- Batch discharges tested prior to discharge;
- Wetlands used for final polishing, with site being made into conservation area with Ducks Unlimited.

Issues of Concern:

- Several pieces of equipment not covered by current Certificate of Approval, including one discharging ammonia fumes;
- Storage of waste oils for longer than 90 days (two years) without notifying MOE as required;
- Several groundwater monitoring wells poorly maintained and not covered by current Certificate of Approval;
- Manual for sewage operations incomplete regarding vegetative cover;
- Calibration and pH monitoring records not kept on site and available for inspection as required.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply for Certificate of Approval for equipment causing emissions to air;
- Comply with requirements for storing waste oils;
- Comply with requirements for groundwater monitoring wells;
- Revise and keep sewage operations manual up to date as required by existing Certificate of Approval;
- Keep pH monitoring and calibration records on site and available for inspection.

Compliance Status: Completed

IMPERIAL OIL LTD.

Site Location: 602 South Christina Street, Sarnia

Inspection Report: 1-9MI0

Type of Facility: Petroleum refinery/chemical plant

Operations: Refines oil and makes petroleum products.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CPPA), Canadian Petroleum Products Institute (CPPI)

Inspection Date: September 27 – December 7, 2004

Sound Business Practices include:

- Containment areas with manual valves to direct contained water
- Dedicated on-site environmental staff
- Storm water retention ponds and tanks to manage storm water on site

Issues of Concern:

- Equipment not approved by current Certificate of Approval;
- All tanks potentially in use not included in Consolidated Certificate of Approval for sewage;
- Spreading (land farming) of waste during unapproved times and conditions;
- Wells not in good repair.

Action: Provincial Officer Order served on April 12, 2005; requirements on company included:

- Have current Certificate of Approval for air amended;
- Have current Certificate of Approval for sewage amended;
- Land-farm sludge in accordance with Certificate of Approval.
- Have a qualified person maintain the wells.

Compliance Status: In progress

INVISTA (CANADA) COMPANY

Site Location: 291 Albert Street, St. Clair

Inspection Report: 1-ABA5

Type of Facility: Chemical plant

Operations: Modifies polymers by adding various additives through an extrusion process in order to alter their properties for specialized applications.

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: April 20 – May 3, 2004

Sound Business Practices include:

- In-house technical evaluation of equipment on a regular basis;
- Contingency planning (what-if scenarios);
- Hazardous operability (HAZOP) studies.

Issues of Concern:

- Inadequate procedures for bag house maintenance;
- Inadequate spill contingency and prevention plan for storage and handling of chemicals and environmental emergencies;
- Inadequate written procedures for operating equipment.

Action: Provincial Officer Order served on July 13, 2004; requirements on company included:

- Establish adequate maintenance procedures for bag house;
- Develop a contingency plan for handling chemicals;
- Complete equipment procedures.

Compliance Status: Completed

KATOEN NATIE CANADA COMPANY

Site Location: 475 Hill Street, Corunna

Inspection Report: 1-AG17

Type of Facility: Plastic recycler

Operations: Processes plastic pellets and powder.

Associations: None identified.

Inspection Date: April 27, 2004

Sound Business Practices: No observable examples.

Issues of Concern:

- Not reporting on air emissions, as required.
- Not registered as a waste generator;
- Poor waste management procedures and record-keeping, with on-site wastes (oils, solvents, hydraulic fluids) not being properly identified, stored and transported.

Action: Provincial Officer Order served on July 13, 2004; requirements on company included:

- Submit report on emissions to air;
- Store, manifest and ship all wastes, as required.

Compliance Status: Completed

LANXESS Inc.

(Formerly Bayer Inc., Butyl I Plant)

Site Location: 1265 Vidal Street South, Sarnia

Inspection Report: 1-9U2X

Type of Facility: Chemical plant

Operations: Rubber manufacturing

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: April 13 – July 8, 2004

Sound Business Practices include:

- Auto samplers for hydrocarbons on non-contact cooling water;
- Ability to redirect cooling water in case of spills;
- All process units and drains connected to Biox treatment plant;
- All discharge devices labeled;
- Ability through redundant systems to lock out process equipment in case of spill;
- Discharge of some processes to flares;
- Process hazard analysis done annually.

Issues of Concern:

- Many pieces of equipment possibly discharging contaminants into air not covered by existing Certificate of Approval;
- Sewage works altered without approval;
- Monitoring wells not properly maintained;
- Irregular manifesting procedures, including multiple waste shipments being conducted on single manifests and receipt of shipments of unapproved wastes;
- No waste and packaging audits and insufficient source separation of wastes.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply for new Certificate of Approval for unapproved equipment;
- Apply for new Certificate of Approval for sewage works;
- Comply with required manifesting procedures;
- Obtain the services of a qualified person to maintain monitoring wells;
- Conduct waste audits and prepare waste reduction plans.

Company appealed order to Environmental Review Tribunal and an agreement was reached with the Ministry of the Environment.

Compliance Status: In progress

LANXESS Inc.

(Formerly Bayer Inc., Butyl II Plant)

Site Location: 1265 Vidal Street South, Sarnia

Inspection Report: 1-A9JL

Type of Facility: Chemical plant

Operations: Rubber manufacturing

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: May 31 – July 8, 2004

Sound Business Practices include:

- All discharge devices are labeled, indicating environmentally critical equipment;
- On-site team of five environmental and safety officers.

Issues of Concern:

- Many pieces of equipment possibly discharging contaminants into air not covered by existing Certificate of Approval;
- Unapproved storm water collection and management system for warehouse;
- Monitoring wells not properly maintained;
- Irregular manifesting procedures, including multiple waste shipments being conducted on single manifests and receipt of shipments of unapproved wastes;
- No waste and packaging audits and insufficient source separation of wastes.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply for new Certificate of Approval for unapproved equipment;
- Comply with required manifesting procedures;
- Obtain the services of a qualified person to maintain monitoring wells;
- Conduct waste audits and prepare waste reduction plans.

Company appealed order to Environmental Review Tribunal and an agreement was reached with the Ministry of the Environment.

Compliance Status: In progress

LANXESS Inc.
(Formerly Bayer Inc.)

Site Location: Scott Road, Sarnia

Inspection Report: 1-A9JL

Type of Facility: Landfill site

Operations: Landfilling

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: May 31 – July 8, 2004

Sound Business Practices include:

- On-site monitoring wells;
- Staff present during landfilling operations; site secure at all other times
- One well not decommissioned, as required.

Issues of Concern:

- Some ground water monitoring wells in need of repair;
- One well not decommissioned, as required.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Obtain the services of a qualified person to maintain monitoring wells;
- Submit Detailed Financial Assurance documentation.

Company appealed order to Environmental Review Tribunal and an agreement was reached with the Ministry of the Environment.

Compliance Status: Completed

NOVA CHEMICALS (CANADA) LTD.
(Corunna Operations)

Site Location: 785 Petrolia Line, Corunna

Inspection Reports: 1-9U7N

Type of Facility: Petroleum Refinery

Operations: Makes ethylene, propylene and aromatics.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA), Canadian Petroleum Products Institute (CPPI)

Inspection Date: September 7- 23, 2004

Sound Business Practices include:

- Dedicated environmental ("responsible care") staff;
- Consolidated Certificate of Approvals for sewage (January 2005); working on same for air.

Issues of Concern:

- Equipment discharging to air modified without approval, fugitive emission sources not covered by Certificate of Approval;
- Numerous clerical and administrative errors in shipping of wastes;
- Water being taken for without being metered;
- No spill containment for lugger bin #98.

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Apply for Certificate of Approval to include fugitive emission sources;
- Update information for Hazardous Waste Identification Network (HWIN);
- Calculate volume of water taken to recharge storm water holding pond;
- Engineer and install adequate secondary containment.

Compliance Status: Completed

NOVA CHEMICALS (CANADA) LTD.

(Moore Plant)

Site Location: 510 Moore Line, Mooretown

Inspection Reports: 1-9U9H

Type of Facility: Chemical plant

Operations: Makes low-density and high-density resins.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA); ISO 9001 certified

Inspection Date: July 12 -16, 2004

Sound Business Practices include:

- Dedicated environmental ("responsible care") staff.

Issues of Concern:

- Twelve sources of emissions to air operating without Certificates of Approval;
- Material being discharged through floor drains in fabrication shop to storm sewer;
- Incorrect manifesting procedures and reporting practices;
- Inadequate spill containment for lube oil drums;
- Reg. 127 report, status incomplete

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Apply for Certificates of Approval for 12 sources of emissions to air;
- Prevent material from fabrication shop being discharged to storm sewer;
- Characterize wastes properly according to Generator Registration Guideline Manual;
- Store waste drums in appropriate manner.
- Complete and resubmit OnAir Report

Compliance Status: In progress

NOVA CHEMICALS CORPORATION

(St. Clair River Site)

Site Location: 285 Albert Street, Corunna

Inspection Reports: 1-9U8W

Type of Facility: Chemical plant

Operations: Makes low-density and high-density resins.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA); ISO 9001 certified

Inspection Date: July 26 – September 9, 2004

Sound Business Practices include:

- Dedicated environmental (“responsible care”) staff;
- Working on consolidated Certificate of Approval application for air

Issues of Concern:

- No Certificates of Approval for certain welding exhausts and cyclone vents;
- Failure to comply with terms and conditions of several Certificates of Approval regarding sewage discharges (e.g., discharges from Invista not covered) ;
- Failure to register and properly classify certain wastes generated on site;
- Failure to amend some Certificates of Approval, as required;
- Inadequate secondary containment to prevent spills;

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Apply for Certificate of Approval for unapproved exhaust systems;
- Apply to have Certificate of Approval amended to cover several waste handling conditions, including discharges from Invista to sewage system;
- Develop and put system in place to ensure accurate reporting of wastes being transferred to waste transportation system;
- Take immediate measures to prevent spill of chemicals into sewer system and the St. Clair River.
- Apply to have Certificate of Approval (air) amended to reflect current operation.

Compliance Status: In progress

NOVA CHEMICALS CORPORATION

(Sarnia)

Site Location: 872 Tashmoo Avenue, Sarnia

Inspection Reports: 1-D16L

Type of Facility: Chemical plant

Operations: Makes styrene.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA), Canadian Petroleum Products Institute (CPPI); ISO 9001 certified

Inspection Date: February 24 – March 5, 2004

Sound Business Practices include:

- Entire site bermed;
- All storm water collected and piped to Lanxess Inc. Blox plant for treatment.
- Environmental manager on staff

Issues of Concern:

- No Certificates of Approval for numerous sources of emissions to air;
- Amendments to Certificates of Approval required for client name and address changes;
- Amendments to Certificates of Approval required for additions and removal of equipment;
- Solid excavation wastes and unknown liquid wastes being stored without proper characterization;
- Groundwater monitoring wells with damaged casings;
- High levels of benzene found in monitoring well;
- Failure to produce spill prevention plan regarding site mechanical integrity.

Action: Company applied, without Order, for new Certificates of Approval and amendments to existing Certificates of Approval for both air emissions and liquid wastes. Provincial Officer Order served on April 8, 2004; requirements on company included:

- Apply to have Certificates of Approval (Air) amended;
- Apply for new Certificates of Approval (Air);
- Apply to have Certificate of Approval (Sewage) amended;
- Retain a qualified contractor to maintain the wells;
- Assess the ground water contamination and report to the Ministry;
- Comply with storage and management of subject waste;
- Retain a qualified person to prepare a Spills Plan and report to the Ministry.

Company requested review of Order on April 15, 2004. Director's Order served on April 27, then revoked and new Order issued on July 21, 2004.

Compliance Status: In progress

NOVA CHEMICALS CORPORATION
(Sarnia)

Site Location: 1367 Vidal Street South, Sarnia

Inspection Reports: 1-A0HZ

Type of Facility: Former chemical plant

Operations: Currently used for storage of both finished, and off spec products. The facility also stores contaminated storm water from its production plant at 872 Tashmoo Avenue. The contaminated storm water is treated, and piped off site to the Lanxess Inc. Biox Plant for tertiary treatment prior to discharge to the St. Clair River.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA), Canadian Petroleum Products Institute (CPPI); ISO 9001 certified

Inspection Date: February 24 – March 4, 2004

Sound Business Practices: No observable examples.

Issues of Concern: None identified.

Action: None required

Compliance Status: Pass

ONTARIO POWER GENERATION, LAMBTON

Site Location: Highway 33, Courtright

Inspection Report: 1-9UKT

Type of Facility: Thermal Generating Station

Operations: Electric power generation

Associations: Member of Sarnia Lambton Environmental Association (SLEA); ISO 14001 certified

Inspection Date: August 23 – December 4, 2004

Sound Business Practices include:

- Redundant systems on sensors, with staff follow-up;
- Storm water management utilizing minimum treatment;
- Recycling and reuse where possible;
- Waste stream from scrubber produces gypsum, which is then sold as drywall-like product;
- Specific work orders to operations generated by automated proactive maintenance schedule.

Issues of Concern:

- No monitoring, as required under Certificate of Approval, of the temperature of the outfall from the north yard drain to the St. Clair River;
- Pooled water on groundwater well heads.

Action: Provincial Officer Order served on January 20, 2005; requirements on company included:

- Ensure better maintenance of groundwater wells;
- Complete inspections of wells as required by Ontario Regulation 903;
- Come into compliance with the Certificate of Approval for sewage and monitor the temperature on a parking lot drain;
- Take preventative measures during unloading of coal.

Company requested review of Order. Director's Order served on February 3, 2005.

Compliance Status: In progress

PRAXAIR CANADA INC.

Site Location: 1832 Vidal Street South, Sarnia

Inspection Report: 1-CF6M

Type of Facility: Gas Plant

Operations: Makes various industrial and commercial gasses.

Associations: None identified.

Inspection Date: June 7- 30, 2004

Sound Business Practices include:

- In-house technical evaluation of equipment on a regular basis;
- Contingency planning (what-if scenarios);
- Hazardous operability (HAZOP) studies.

Issues of Concern:

- Nine pieces of equipment with emissions to air not covered by Certificate of Approval;
- Chemicals in use not covered by Certificate of Approval.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply to have Certificate of Approval amended to include unapproved equipment;
- Apply to have Certificate of Approval amended to include chemicals.

Compliance Status: Completed

PRAXAIR CANADA INC.

Site Location: 915 Vidal Street South, Sarnia

Inspection Report: 1-AA11

Type of Facility: Gas Plant

Operations: Makes various industrial and commercial gases.

Associations: None identified.

Inspection Date: June 8 -30, 2004

Sound Business Practices: No observable examples.

Issues of Concern:

- Four pieces of equipment with emissions to air not covered by Certificate of Approval;
- Inadequate containment for above-ground storage tanks, no spill contingency plan.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply to amend Certificate of Approval to include unapproved equipment;
- Prepare spill contingency plan.

Compliance Status: Completed

ROYAL POLYMERS LIMITED

Site Location: 900 Vidal Street South, Sarnia

Inspection Report: 1-9U74

Type of Facility: Chemical plant

Operations: Makes poly vinyl chloride resin which is used in polymer-based home improvement, consumer and construction products.

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: September 21 – October 1, 2004

Sound Business Practices:

- Dedicated on-site environmental staff;
- Consolidated Certificate of Approval for Air emission sources
- Ability to lock out process equipment in case of system upset
- Redundant sensors on systems
- Computerized preventive maintenance schedule
- Secondary containment surrounding most process and storage areas

Issues of Concern:

- Inadequate containment in chemical storage area;
- Manifest record-keeping copies missing.
- Unapproved equipment not covered by current Certificate of Approvals for air.
- Not complying with current Certificate of Approval for taking samples.

Action: Provincial Officer Order served April 12, 2005; requirements on company included:

- Apply to have its Certificate of Approval amended to include all equipment;
- Start complying with its Certificate of Approval by sampling and monitoring pH.

Compliance Status: In progress

SCU NITROGEN CANADA

Site Location: 161 Bickford Line, Courtright

Inspection Report: 1-9MME

Type of Facility: Fertilizer plant

Operations: Makes sulphur-coated urea.

Associations: None identified.

Inspection Date: February 24 -25, 2004.

Sound Business Practices include:

- Secondary containment around all but one process unit;
- Conductivity monitors on condensate and storm water;
- Additional conductivity meters on surface run-off leaving property;
- Dedicated on-site environmental staff

Issues of Concern:

- Two pieces of equipment with emissions to air not covered by Certificate of Approval;
- No spill contingency plan.

Action: Provincial Officer Order served on April 8, 2004; requirements on company included:

- Apply to have Certificate of Approval amended to include unapproved equipment;
- Prepare spill contingency plan.

Compliance Status: Completed

SHELL CANADA PRODUCTS LTD.

Site Location: 150 St. Clair Parkway, Moore

Inspection Report: 1-9MLA

Type of Facility: Petroleum refinery

Operations: Produces liquefied petroleum gas, gasoline, jet fuel, solvents and bunker fuel. Also operates docking facilities for vessels on the St. Clair River.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Chemical Producers' Association (CCPA), Canadian Petroleum Products Institute (CPPI), American Petroleum Institute (API), Chemical Valley Emergency Coordinating Organization (CVECO), ISO 9001 and ISO 14001 certified

Inspection Date: March 29 – April 23, 2004.

Sound Business Practices include:

- Computerized, preventative maintenance schedule;
- Automated wastewater treatment plant with effluent monitoring, connected to alarms capable of diverting effluent to storage pond.
- Hazardous operability (HAZOP) studies
- Ability to redirect water in cases of spills
- Ability through redundant systems to lock out process equipment in case of spill
- Dedicated on-site environmental staff and health and safety manager

Issues of Concern:

- Several pieces of equipment with emissions to air not covered by Certificate of Approval;
- Wastewater accepted for treatment from Basell without a Certificate of Approval;
- Improper storage of Lab drums.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply for Certificate of Approval for equipment not covered;
- Apply to have Certificates of Approval amended to reflect changes to flare system and changes in composition to flue gas fuel oil;
- Apply for Certificate of Approval to accept wastewater for treatment in wastewater plant;
- Provide appropriate secondary containment for storage of Lab drums.

Compliance Status: In progress

SUNCOR ENERGY PRODUCTS INC.

Site Location: 187 Clarence Street, Sarnia

Inspection Report: 1-9U6N

Type of Facility: Petroleum refinery/chemical plant

Operations: Produces gasoline, kerosene, home heating oil, jet and diesel fuels, residual oils for industrial fuels. Also makes aromatics (benzene, toluene, xylene) as feedstocks in the production of plastics and pharmaceuticals.

Associations: Member of Sarnia Lambton Environmental Association (SLEA), Canadian Petroleum Products Institute (CPPI); ISO 14001 certified

Inspection Date: June 21 – July 9, 2004

Sound Business Practices included:

- In-house technical evaluation of equipment on a regular basis
- Dedicated on-site environmental staff

Issues of Concern:

- No Certificate of Approval for emissions to air from 41 above-ground storage tanks;
- Source separation and waste reduction plans not implemented, waste audits not conducted;
- Groundwater monitoring wells poorly maintained.

Action: Provincial Officer Order served on August 31, 2004; requirements on company included:

- Apply for Certificate of Approval to include above-ground storage tanks;
- Prepare and supply waste reduction and source separation plans;
- Complete survey of groundwater monitoring wells.

Compliance Status: Completed

TERRA INTERNATIONAL (CANADA) INC.

Site Location: 161 Bickford line, Courtright

Inspection Report: 1-9UJ3

Type of Facility: Chemical Plant (Fertilizer)

Operations: Produces urea, ammonia, nitric acid, ammonium nitrate, urea-ammonium nitrate, aqua ammonia, urea solution, carbon dioxide, and argon.

Associations: Member of Sarnia Lambton Environmental Association (SLEA)

Inspection Date: April 13 -21, 2004

Sound Business Practices include:

- Berms around storage tanks;
- pH and conductivity meter connected to trip gates in discharge ditch;
- Alarmed gate for diverting discharge to containment lagoon when necessary;
- Skimming and absorbent booms located in discharge ditch;
- Company has a spill prevention strategy;
- Company has a director of environment, health and safety on staff

Issues of Concern:

- No Certificate of Approval for emissions to air from some sources;
- Wastes stored on site longer than 90 days;
- Improper mixing of wastes for transport;
- Manifest copies for shipped wastes not retained for two years;
- Unapproved increase in production capacity, resulting in a potential increase in emissions to air;
- Improper sewage sludge dewatering process;
- Lack of a general spill contingency plan;
- Poorly maintained groundwater monitoring wells;
- Exceeding effluent discharge limitations under Effluent Monitoring and Effluent Limits regulations;
- Expired permit to take water;
- Correct name was not reflected on some Certificates of Approval

Action: Provincial Officer Order served on July 13, 2004; requirements on company included:

- Apply for a single comprehensive site wide Certificate of Approval (air) which consolidates existing Certificates of Approval and includes unapproved sources;
- Apply to amend Certificate of Approval (sewage);
- Improve subject waste handling practices by submitting a storage report, stop processing sludge and mixing waste;
- Prepare waste reduction work plan;
- Identify the cause of a Effluent Monitoring and Effluent Limits regulations exceedence.

Compliance Status: Completed

TRANSALTA ENERGY CORPORATION

(Power Island)

Site Location: 1741 River Road, Sarnia

Inspection Report: 1-9UHW

Type of Facility: Co-generation plant (Electric/steam)

Operations: Generation of electric and steam energy for HydroOne grid and neighbouring petrochemical plants.

Associations: Member of Canadian Electrical Association

Inspection Date: September 13 -24, 2004

Sound Business Practices include:

- Environmental compliance consultant recently hired;
- Heat reclamation units used with new turbines

Issues of Concern:

- Sewage effluent exceeded maximum daily loadings;
- Clerical and administrative errors in shipping wastes;

Action: Provincial Officer Order served on January 20, 2005 covering the three facilities owned by this company. Requirements for this site included:

- Investigate and produce a report outlining compliance with existing Certificates of Approval terms and conditions for effluent loadings per day
- Update HWIN information.

Compliance Status: Completed

TRANSALTA ENERGY CORPORATION
(South Block)

Site Location: 1741 River Road, Sarnia

Inspection Report: 1-H5OT

Type of Facility: Co-generation plant (Electric/steam)

Operations: Generation of electric and steam energy for HydroOne grid and neighbouring petrochemical plants.

Associations: Member of Canadian Electrical Association

Inspection Date: September 13 -24, 2004

Sound Business Practices include:

- Old boilers and super heaters mothballed

Issues of Concern: None identified.

Action: Provincial Officer Order served on January 20, 2005 covering the three facilities owned by this company. No actions were directed to this specific location.

Compliance Status: Not applicable

TRANSALTA ENERGY CORPORATION
(North Block)

Site Location: 1741 River Road, Sarnia

Inspection Report: 1-H5OE

Type of Facility: Co-generation plant (Electric/steam)

Operations: Generation of electric and steam energy for HydroOne grid and neighbouring petrochemical plants.

Associations: Member of Canadian Electrical Association

Inspection Date: September 13 -24, 2004

Sound Business Practices include:

- Recently installed high-technology, steam super-heater (highly efficient, can burn alternative fuels).

Issues of Concern:

- Lack of sampling of alternative fuel supplied by Lanxess;
- Sewage effluent exceeded maximum daily loadings.

Action: Provincial Officer Order served on January 20, 2005 covering the three facilities owned by this company. Requirements for this site included:

- Complete full analysis of alternative fuel supplied by Lanxess;
- Investigate and produce a report outlining compliance with existing Certificate of Approval terms and conditions for effluent loadings per day

Compliance Status: Completed