

Allen County Environmental Citizens Advisory Committee
INEOS Lima Chemicals Status Report
September 30, 2015

Health, Safety and Environment Performance Summary

<i>Ineos and PCS Nitrogen Facility*</i>	<u>2006</u>	<u>2007</u>	<u>2008*</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
OSHA Recordables	2	3	4	1	2	0	5	5	1	4
DAFW Injuries	0	0	1	0	1	0	2	1	0	0
RQ Releases	8	5	4	4	0	1	2	1	2	1
UIC Permit % Compliance	100%	100%	99.99%	100%	99.99%	99.99%	100%	100%	99.99%	99.99%
AOGI Service Factor	99.72%	99.8%	99.6%	99.7%	100%	100%	99.99%	99.99%	100%	99%

** Beginning 2008, statistics are for the INEOS facility only. PotashCorp data is reported separately since INEOS is no longer their Agent.*

Safety:

- INEOS Lima incurred a recordable injury in July and another in September.
 - ✓ On 7/23/2015 an operator strained their back while descending a ladder.
 - ✓ On 9/26/2015 an operator fractured their foot while exiting a building.
- On September 30 a reportable quantity of Acrylo occurred; the AOGI shut down due to excessive propylene breakthrough.
- The Dept. of Homeland Security approved Lima's Site Security Plan.
- Semi-annual Respiratory and Hearing Conservation Audits were completed in July.
- Hazard Recognition train-the-trainer sessions were conducted in July.
- Updated plant emergency sirens were put into service in August.
- The new Gallagher card access control system installation was completed in September.

Environmental:

- The RCRA renewal permit was issued for another 10 year period.
- The four deep well renewal permit applications were submitted to the EPA in July.
- The Ohio EPA RCRA annual inspection conducted in August went well with no findings.
- The *draft* no-migration for Lima's four injection wells was received from the USEPA Region V in September.

PSM – Process Safety Management:

- An internal PSM audit was conducted the week of October 5.

Acronyms

AOGI	Absorber Off Gas Incinerator
BSI	British Standard Institute
BST	Behavioral Science Technology
CAPU	Continuous Acetonitrile Purification Unit
CEM	Continuous Emission Monitor
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CGA	Cylinder Gas Audit
CWC	Chemical Weapons Convention
DAFW	Days Away From Work
DCS	Distributed Control System
DHS	Department of Homeland Security
EBA	Emergency Breathing Apparatus
EMA	Emergency Management Agency
FOV	Finding of Violation
FRC	Flame Resistant Clothing
HAZOP	Hazard and Operability Study
ISO	International Organization of Standardization
LASER	Lima Area Security and Emergency Response Team
LDAR	Leak Detection and Repair
LEPC	Local Emergency Planning Committee
LOPA	Layers of Protection Analysis
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
OAC	Ohio Administrative Code
OCTC	Ohio Chemistry Technology Council
ODH	Ohio Department of Health
OEL	Open Ended Line
OEPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
MIT	Mechanical Integrity Test
MOC	Management of Change
NIMS	National Incident Management System
OEL	Open Ended Lines
PHA	Process Hazard Analysis
PPE	Personal Protective Equipment
PSM	Process Safety Management
PSV	Pressure Safety Valve
PTI	Permit to Install
RATA	Relative Accuracy Test Audit
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act
SCBA	Self Contained Breathing Apparatus
SERC	State Emergency Response Commission
SHE	Safety, Health & Environmental
SIL	Safety Integrity Level
SWMU	Solid Waste Management Unit
TAR	Turnaround
UIC	Underground Injection Control
VOC	Volatile Organic Compounds
WDW	Waste Disposal Well (Deepwell)

**Allen County Environmental Citizens' Advisory Committee
Husky - Lima Refinery Status Report**

1. EXCEEDANCES/RELEASES

The table below summarizes the last four years of environmental performance.

	2012	2013	2014	2015
Air Overall Excess Emission Compliance	99.8%	99.2%	99.5%	98.2%
SARA Reportables	6	4	7	6
CERCLA Reportables	2	2	6	2
NPDES Reportables	5	2	4	1
Agency Reportable Spills (including RCRA)	0	0	1	3

Reportable Release Summary

Emissions

Date	Release Type	Description	Emissions			
			SO ₂ (tons)	H ₂ S (tons)	H ₂ SO ₄ (tons)	NO _x (tons)
6/15/15	SARA CERCLA	A power outage affected various process units which resulted in flaring whereby the reportable quantities were exceeded.	20.9	0.22	0.75	1.0
6/15/15	RCRA	A valve was left open while removing hazardous waste from the API Separator. There were 281 lbs of material spilled with a reportable quantity (RQ) of 10 lbs. The material was contained on-site and the area was remediated.	NA	NA	NA	NA
6/16/15	NPDES	Due to excessive rainfall, impounded storm water exceeded the maximum capacity of the system resulting in an overflow from the emergency spillway to the river. The water was analyzed as required and there were 2 samples that exceeded the maximum allowable benzene concentration (0.88 ppm).	NA	NA	NA	NA
6/18/15	Oil Sheen CERCLA	G-Tank was found to be leaking during the impounding of stormwater during the excessive rainfall. Oil sheen was observed in the drainage swale, which also constitutes a CERCLA release.	NA	NA	NA	NA
8/10/15	SARA	Pipefitters were working on the chain operator and actuator on the LIU acid gas jump-over valve. It was discovered that the LIU acid gas valve was found cracked open to the acid gas flare, resulting in the release.	0.67	NA	NA	NA

Reportable Quantities SO₂ = 500 lbs H₂S = 100 lbs H₂SO₄ = 1,000 lbs NO_x = 1,000 lbs

2. Permits/Projects

No.	Description	Permit Application Type	Permit Issued Final
1	Isocracker Unit Rebuild Modification	Air	Yes
2	Ultraformer Furnace Reconstruction	Air	Yes
3	Crude Oil Flexibility Project Permit-to Install Modification	Air	Yes
4	Minor Title V Permit Modification to Incorporate Terms and Conditions of 5 Permits-to-Install for Various Emissions Units	Air	Yes
5	Installation of Sewers for the Reformer Unit Filters	Wastewater	Yes
6	Installation of rerouted sewers for the NESHAP Blower Project	Wastewater	Yes
7	The Ohio EPA issued the NPDES Construction Site Storm Water General Permit for the new parking lot along Ft. Amanda Road.	Wastewater	Yes
8	The Ohio EPA issued Findings and Orders for the approval of the micro-biocide chemical that will be used at the Ashland Cooling Tower.	Wastewater	Yes
9	The Ohio EPA issued the renewal permit for the Biosolids Land Application Management Plan for the Cygnet Landfarm. The only change to the plan is for the increased biosolids sampling frequency from monthly to one sample per every 15 loads of biosolids placed in the storage building.	Wastewater	Yes
10	The Ohio EPA issued an emergency hazardous waste permit for the overflow of stormwater from G-Tank to D Pond with a benzene concentration >0.5 ppm.	RCRA	Yes

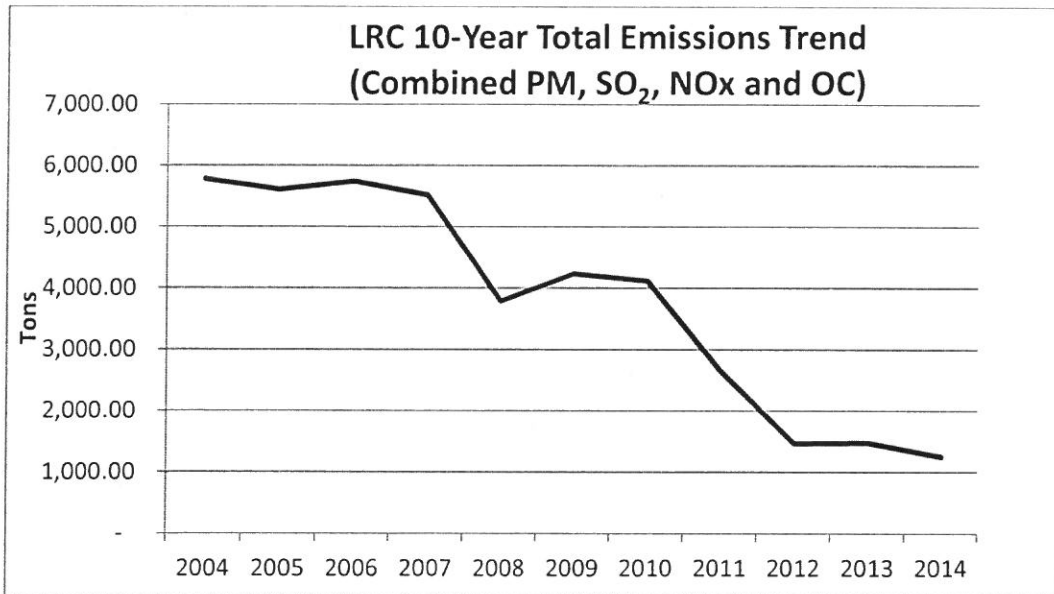
Agency Inspections/Enforcement/Rulemaking

- The Ohio EPA was onsite 5/7/15 to conduct the annual wastewater inspection for the AWWTP, Buckeye Road Tan Farm, and the Lab. They conducted a walk-thru of each area, and a records review. No citations were made.
- The Ohio EPA was onsite 6/17/15 to conduct the annual Air Compliance Inspection. They looked at a year's worth of recordkeeping data and also conducted random checks/inspections inside the refinery for compliance with LDAR requirements, the Title V Operating Permit and our multiple Permits-to-Install. There were 4 missing data points discovered in our documentation and a Notice of Violation was issued. The Ohio EPA issued a Resolution of Violation following the response submitted to address the violation for missed monitoring at the Reformer guard bed that was noted.
- The Ohio EPA was on-site 9/28/15 to conduct the RCRA Hazardous Waste Compliance inspection. The inspectors reviewed numerous records and manifests, and conducted a thorough walk-through of the Wastewater Treatment Unit, the Waste Handling Area, the Maintenance Shop, and the Lab. A written inspection report will be issued by the Ohio EPA with any violations or deficiencies.

- The negotiation settlement meeting scheduled for 9/22/15 with EPA and the Department of Justice pertaining to the Notice of Violation issued in February was postponed due to a scheduling conflict with the DOJ. The meeting will be rescheduled as soon as the DOJ provides alternate dates.
- Refinery Residual Risk Rule – On 9/29/15, the EPA issued a 745 page final rule that will further control toxic air emissions from petroleum refineries and provide information to the public and neighboring communities. The rule is to be fully implemented in 2018 and will consist of the following measures.
 - Continuous monitoring of benzene concentrations at the fence-line of the refinery.
 - Significant reduction of smoking flares and upset emission events, including associated emissions releases from pressure release devices. Release events must be analyzed to determine the cause and remedied. There will be a hard limit of no more than 3 events in 3 years per device or flare.
 - Require additional emission reductions from storage tanks and delayed coking unitsThe final rule is being reviewed and a summary of the implications for the refinery will be prepared.

Major Reports

- Annual Title V Fee Emissions Report. The graph below illustrates the reduction in emissions over time which is primarily attributed to the Consent Decree Projects



- The following CEMS RATA test reports were submitted to the Ohio EPA.

Test Date	OEPA ID	Source Description	Title V Permit Requirement	Pollutants	Test Type	USEPA Methods	OEPA Witness	
4/21/2015	B032	Nebraska Boiler	Part C 11.b)(2)j.	NOx ppm	RATA/Initial Certification	3A, 7E, 19, PS-2, PS-3	Yes	
				lb NOx / MMBtu				
				O2 %				
4/22/2015	B035	B&W Boiler	Part C 14.b)(2)l.	NOx ppm	RATA	3A, 7E, 19, PS-2, PS-3	No	
				lb NOx / MMBtu				
				O2 %				
4/23/2015	B016, B026, B027, B028, B035	East Side Fuel Gas System	Part C 14.f)(1)	lb CO/MMBtu	CO emissions	1-4, 10	Yes	
			Part C 5.d)(2)e.	H2S ppm	RATA	15, PS-7		
			Part C 7.d)(2)c.					
			Part C 8.d)(2)e.					
4/24/2015	P040, P041	Sulfur Recovery Unit, BB Treater	Part C 9.d)(2)e.	Part C 39.d)(1)	SO2 ppm	RATA	3A, 6C, 1-4, PS-2, PS-3, PS-6	Yes
				Part C 39.d)(2)	SO2 lb/hr			
				Part C 40.d)(1)	O2 %			
				Part C 40.d)(2)	Flow			
					lb SO2 / M lb S processed			
4/27/2015	P010	FCC ESP Exhaust	Part C 23.f)(2)	O2 %	RATA	1, 2, 3A, 4, 6C, PS-2	Yes	
				ppm SO2				

Acronyms			
AFE	Authorization for Expenditure	KHT	Kerosene Hydrotreater
AFU or DAF	Air Flotation Unit (Dissolved Air Flotation)	LDAR	Leak Detection and Repair
AWWTP	Advanced Wastewater Treatment Plant	MCC	Motor Control Center
BDO	Butanediol	mg/L	Milligram per liter
BEHP	Bis(2-ethylhexyl) Phthalate	MSOR	Maximum Source Operating Rate
Btu	British Thermal Unit	NESHAP	National Emission Standards for Hazardous Air Pollutants
CCF	Central Control Facility	NOV	Notice of Violation
CEMS	Continuous Emission Monitor System	NOx	Nitrogen Oxides
CERCLA	Comprehensive Environmental, Response, Compensation and Liability Act	NPDES	National Pollution Discharge Elimination
CO	Carbon Monoxide	OEPA	Ohio Environmental Protection Agency
CO ₂	Carbon Dioxide	PSV	Pressure Safety Valve
DHT	Diesel Hydrotreater	PTI	Permit to Install
DMRQA	Discharge Monitoring Report Quality Assurance	RCFA	Root Cause Failure Analysis
EHS	Environmental, Health & Safety	RQ	Reportable Quantity
EPA/USEPA	Environmental Protection Agency	RCRA	Resource Conservation and Recovery Act
EPCRA	Emergency Planning and Community Right-to-Know Act	SARA	Superfund Amendments and Reauthorization Act
ERAC	Environmental Review Appeals Commission	SCR	Selective Catalytic Reduction
ESP	Electrostatic Precipitator	SGP	Saturated Gas Plant
FCCU	Fluidized Catalytic Cracking Unit	SO ₂	Sulfur Dioxide
HDS	Hydro-Desulfurization	SRU	Sulfur Recovery Unit
H ₂ S	Hydrogen Sulfide	TRI	Toxic Release Inventory
JSMC	Joint Systems Manufacturing Complex	TSCA	Toxic Substance Control Act
LIU	Lima Integrated Unit	VOC	Volatile Organic Compound

Allen County Environmental Citizen's Advisory Committee
ISP Status Report (April 2015 – September 2015)

20 October 2015

1. SAFETY/SECURITY

	2013	2014	2015 YTD
OSHA recordable – ISP	0	± 0	0
OSHA recordable - Contractors	0	0	0

2. RELEASES

- No RQ incidents (YTD = 0)

3. AIR

- The following reports were submitted to Environmental Protection Agency (EPA):
 - Emissions inventory
 - Title V Compliance Certification
 - Toxic Release Inventory (TRI 313)
- In August, our continuous emission monitoring system (CEMS) for nitrogen oxides (NOx) has successfully passed the Relative Accuracy Test Audit (RATA).

4. WATER

- Nothing to report

5. RESOURCE CONSERVATION AND RECOVERY ACT

- Nothing to report

6. OTHER

- Nothing to report

