Ohio EPA
40 years and moving forward

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

October 1, 2013

Mr. Eric Cassisa
INEOS ABS (USA) Corporation
365 Three Rivers Parkway
Addyston, Ohio 45001

RE: INEOS ABS (USA) Corp., OH0009946;1IF00001*KD, CEI

Dear Mr. Cassisa:

On September 13, 2013, I met with Jessica Reece and conducted a National Pollutant Discharge Elimination System (NPDES) Co mpliance Evaluation Inspection (CEI) at INEOS ABS (USA) Corporation. The purpose of this inspection was to evaluate compliance with the terms of the NPDES permit. Please note that the report, by its format, tends to highlight negative areas.

As indicated in the attached CEI report, all the areas received a Satisfactory rating.

Thank you for the time extended during your inspection. If you have any questions, please contact me at this office at (937) 285-6108.

Sincerely,

Marianne Piekutowski
Environmental Specialist 2
Division of Surface Water

Enclosures

cc: Jessica Reece, INEOS ABS (USA) Corporation

MP\bp

OhioEPA

State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding

Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
OH0009946	1IF00001*KD	09/13/2013	C	S	2

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
INEOS ABS Corporation 356 Three Rivers Parkway Addyston, Ohio 45001	11:00 am	11/1/2012
	Exit Time	**Permit Expiration Date**
	2:05 pm	10/31/2017
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
Jessica Reece/WWTP Engineer	(513) 467-2321	
Name, Address and Title of Responsible Official	**Phone Number**	
Eric Cassisa, Plant Manager INEOS ABS (USA) Corporation 356 Three Rivers Parkway Addyston, Ohio 45001	(513) 467-2400	

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	N	Flow Measurement	N	Pretreatment
N	Records/Reports	N	Laboratory	N	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	N	Self-Monitoring Program
S	Facility Site Review	N	Sludge Storage/Disposal	N	Other
N	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)

See attached report.

Inspector	Reviewer
10/1/13	10/1/13
Marianne Piekutowski Division of Surface Water Southwest District Office	Date Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
	Date

Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

(a) Correct name and mailing address of permittee ..... Y
(b) Correct name and location of receiving waters..... Y
(c) Do Categorical Standards apply?...If yes, list applicable standards.. Y

40 CFR 414 Subpart D

(d) Product(s) and production rates conform with permit application (Industries)..... Y
(e) Flows and loadings conform with NPDES permit..... Y
(f) Treatment processes are as described in permit application... Y
(g) All discharges are permitted..... N
(h) Number and location of discharge points are as described in permit..... Y
(i) Storm water discharges properly permitted..... Y

Comments/Status:

g) The discharge from the barge area is being included in the NPDES permit. This modification is currently in public notice.

Section F: Compliance

(a) Any significant violations since the last inspection..... N
(b) Appropriate Non-compliance notification of violations..... Y
(c) Permittee is taking actions to resolve violations..... Y
(d) Permittee has a compliance schedule..... Y
(e) Compliance schedule contained in..... NA
(f) Permittee is in compliance with schedule..... Y
(g) Has biomonitoring shown toxicity in discharge since last inspection Y

Comments/Status:

There were two spills in the May/June 2013 timeframe. Both of these were addressed under separate notices of violation. The facility is still investigating removing the oil from the crane for the barge, but it has not been done.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a) Standby power available.....generator ☒ or dual feed ☒..... Y

i. What does the back-up power source operate.....

There is a generator for the wastewater plant. The rest of the plant has a dual feed with an automatic transfer.

ii. How often is the generator tested under load.....

Weekly start up testing, and monthly tests under load done by electrical engineers.

(b) Which components have an alarm system available for power or equipment failures.....

Almost everything is on the PROVOX system for alarms. There are radios and fire alarms if all the power goes out.

(c) All treatment units in service other than backup units..... Y

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

Maintenance at WWTP is done during the plant shutdown. There is a maintenance coordinator for each area. They schedule mechanics. There is a dedicted mechanic for waste treat again. The facility is going back to SAP for scheduling.

(e) Any major equipment breakdown since last inspection..... N

(f) Operation and maintenance manual provided and maintained..... Y

(g) Any plant bypasses since last inspection..... N

(h) Any plant upsets since last inspection..... Y

Comments/Status:

Currently working on the secondary DAF. Effluent is still running through the unit. Paddles have fallen off the chain unevenly causing wear on the sprockets. Waiting for a new chain and sprockets. The parts have a four week lead time. The unit is running without the paddles so if the discharge looks bad, it is shutdown and cleaned.

Permit # : OH0009946
NPDES #: 1IF00001*KD

Section H: Sludge Management

(a) Method of Sludge Disposal...

Rumpke Hughes Rd.

☐ Land Application
☐ Haul to Another NPDES Permitee
☒ Haul to a Mixed Solid Waste Landfill

*if one of the selected methods is land application, complete applicable charts.

Class A - Exception Quality Sewage Sludge (monitoring station 584)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options							
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 – >75% Percent Solids without Unstabilized Solids	Option 8 - >75% Percent Solids with Unstabilized Solids
Alternative 1 – Time and Temperature Regime (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 – High pH and High Temperature (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 3 – Other Processes (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 4 – Unknown Processes (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Composting (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Heat Drying (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Heat Treatment (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Thermophilic Aerobic Digestion (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Beta Ray Irradiation (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Gamma ray Irradiation (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Pasteurization (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 6 - Approved Equivalent Process	☐	☐	☐	☐	☐	☐	☐	☐

Permit # : OH0009946
NPDES #: 1IF00001*KD

Class B Sewage Sludge (monitoring station 581)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 – >75% Percent Solids without Unstabilized	Option 8 - >75% Percent Solids with Unstabilized	Option 9 – Land Injection	Option 10 – Immediate Incorporation
Alternative 1 - Geometric Mean of Seven Fecal Samples (84369)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Aerobic Digestion (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Air Drying (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Anaerobic Digestion (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 – Composting (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Lime Treatment (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 3 – Approved Equivalent Process	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

(a) Has amount of sludge generated changed significantly since the last inspection..... NA

(b) How much sludge storage is provided at the plant.....

NA - Rumpke can pull out bins as they fill. There are four bins on-site.

(c) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... NA

(d) Any complaints received in last year regarding sludge..... NA

(e) 5/8" screen at headworks for facilities that land apply sludge..... NA

(f) Are sludge application sites inspected to verify compliance with NPDES permit..... NA

(g) Is a contractor used for sludge disposal..... NA

If so, what is the name of the contractor.....

Rumpke

Comments/Status:

Section I: Self-Monitoring Program

Flow Measurement:

(a) Primary/Secondary flow measuring devices operated and maintained..... Y
Type of device (e.g. weir with ultrasonic level sensor):
001 - Magmeter; 002 - Weir with manual reading done every day.

(b) Calibration frequency adequate ..... Y
(Date of last calibration: Quarterly.)

(c) 24-hour recording instruments operated and maintained.....Y

(d) Flow measurement equipment adequate to handle full range of flows..... Y

(e) Actual flow discharged is measured..... Y

(f) Flow measuring equipment inspection frequency
☒Daily ☐Weekly ☐monthly ☒other

Comments/Status:

c) 001 for the magmeter, and 002 for the thermometer.
f) The weir on 002 is checked daily, and the magmeter is checked quarterly unless there is an alarm.

Section I: Self-Monitoring Program (con't)

Sampling:

(a) Sampling location(s) are as specified by permit..... Y

(b) Parameters and sampling frequency agree with permit..... Y

(c) Permittee uses required sampling method..... Y
(see GLC page)

(d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments/Status:

Section I: Self-Monitoring Program (con't)

Laboratory:

General

(a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... N

(b) Do SOP's include the following if applicable..... Y

- Title
- Scope and Application
- Summary
- Sample Handling and Preservation
- Interferences
- Apparatus and Materials
- Reagents
- Procedure
- Calculations
- Quality Control
- Maintenance
- Corrective Action
- Reference (Parent Method)

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of know precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

(c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y

(d) If alternate analytical procedures are used, proper approval has been obtained..... NA

(e) Analyses being performed more frequently than required by permit. N

(f) If (e) is yes, are results in permittee's self-monitoring report..... NA

(g) Satisfactory calibration and maintenance of instruments/equipment. NE (see score from GLC page)

(h) Commercial laboratory used..... Y

Parameters analyzed by commercial lab: *BOD, TSS, pH, NH3, TKN, Organics, DO, Conductivity, Bioassay, Hg, Nitrite-Nitrate, Bioassays*

Lab name: *Cardinal Laboratories, Alloway does some of the organics, Low Level Hg, and the bioassay. (Cardinal is also doing permit renewal analytical data.)*

Discharge Monitoring Report Quality Assurance (DMRQA)

(a) Participation in latest USEPA quality assurance performance sampling..... Y
Date: 8/16/2011

(b) Were any parameters "Unsatisfactory"..... N

(c) Reasons for "Unsatisfactory" parameters.....

NA

Comments/Status:

Cardinal and Alloway participate in DMRQA program.

Section J: Effluent/Receiving Water Observations

Outfall # 001
Outfall Description: This is a diffuser. It is underwater. It is the discharge for the wastewater treatment plant.
Receiving Stream: Ohio River
Receiving Stream Description: Bathing water, WWH, Agricultural, Industrial, and Public Water Supply.

Outfall # 002
Outfall Description: This outfall takes the cooling water, storm waters and contact cooling water to the Ohio River. There is a weir, and it goes to a flume into the river.
Receiving Stream: Ohio River
Receiving Stream Description: Bathing water, WWH, Agricultural, Industrial, and Public Water Supply.

Comments/Status:

Section K: Multimedia Observations

(a)	Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories.....	N
(b)	Do you notice staining or discoloration of soils, pavement or floors..	N
(c)	Do you notice distressed (unhealthy, discolored, dead) vegetation..	N
(d)	Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks.....	N
(e)	Do you notice any unusual odors or strong chemical smells.....	N
(f)	Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities.....	N

If any of the above are observed, ask the following questions:
(1) What is the cause of the condition?
(2) Is the observed condition or source a waste product?
(3) Where is the suspected contaminant normally disposed?
(4) Is this disposal permitted?
(5) How long has the condition existed and when did it begin?

Comments/Status:

INEOS ABS (USA) CORPORATION
NPDES COMPLIANCE EVALUATION INSPECTION
DATE OF INSPECTION: September 13, 2013

ITEMS FOR DISCUSSION:

INEOS is in the process of modifying its NPDES for the discharges in the barge area. The public notice period will end on September 30, 2013. This is also a follow up on the storm water issues in the firefighting pits noted in last year's inspection from USEPA.

COMPLIANCE EVALUATION:

On the following dates, flow measurements could not be taken at outfall 002 because the Ohio River inundated the flow meter: February 2-5, 2013. This is down from last year. This inspection report will be the Notice of Violation for these code violations.

The facility had two releases since the last inspection. These were addressed in separate Notices of Violation.

OBSERVATIONS:

The facility's new NPDES permit has been issued. The permit became effective on November 1, 2012. A modification was received on July 31, 2013. The public notice period ended September 30, 2013. It is proposed to go final on November 1, 2013.

The two process outfalls were observed. Outfall 001 is underwater with a diffuser. Outfall 002 was flowing through the weir to the Ohio River. Outfall signage was present at these outfalls.

Divers inspected outfall 001 on September 10, 2013. Written notification of the inspection was provided. The discharge ports were cleaned, the end cap blind flange assembly was removed and light sediment removed, and the bolts holding the flange cap were replaced. A dye test was performed, and no problems were found.

The plant shutdown is scheduled for the last week of October and first week in November. During this shutdown, waste treatment will undergo maintenance. The shutdown is longer this year because there will be an electrical shutdown, and the passivation of the butadiene dome. The nitrate solution associated with the passivation will be hauled off-site for disposal. The sludge pits will be having work done. New beams to support the covers will be installed above grade, and new covers will be installed. This is to repair the corrosion. Then, in March 2014, when CWD has its five day shutdown, the hydrosieve buildings will be replaced. This replacement will allow the fumes from the wastewater to be pulled directly from the tops of the hydrosieves. These will rest on the new beams from the sludge pits. During the past year, the top of

tank C4 buckled. INEOS is investigating whether to remove, replace or pop out the cover. This will be done during the next year. The tank acts as a storage/equalization tank for waste treatment. INEOS is still working with Crown/Veolia about using the Hydrex instead of the alum at waste treat. The alum is also used for pH adjustment so the ability to add acid for neutralization would also be needed. If this trial is done, it would be sometime during the next year.

Maintenance was done at waste treatment during the past year. The primary DAF was recoated, and the chains, sprockets and shoes for the flights were replaced in June 2013. The new conveyors were installed for the sludge press on July 24, 2013. The operation is still being tweaked. In August 2013, expansion joints were installed in the biofilter piping. There is still some work to be done on the expansion joints at tank C4. The mulch was replaced and snake guards were installed to prevent snakes from sunning on the biofilter.

The nitrogen plant is being installed by Air Products at the INEOS facility. The pad has been poured, but Air Products is approximately two months behind on getting building permits. The discharge permit for MSD has been obtained, but nothing is tied in yet. The existing nitrogen plant is no longer operational. INEOS is using liquid nitrogen until the new nitrogen plant is operational. The tentative date to start operations is in October 2013, but it is unclear if this date will be achieved.

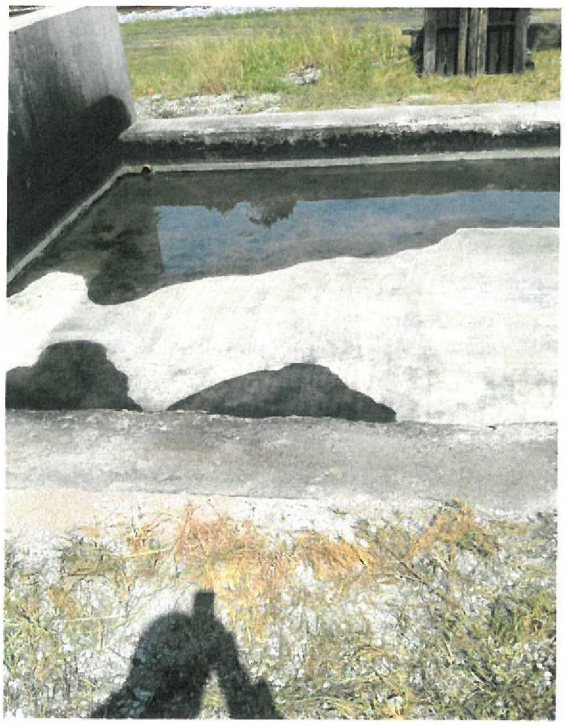
The new natural gas burner for the boiler is operational.

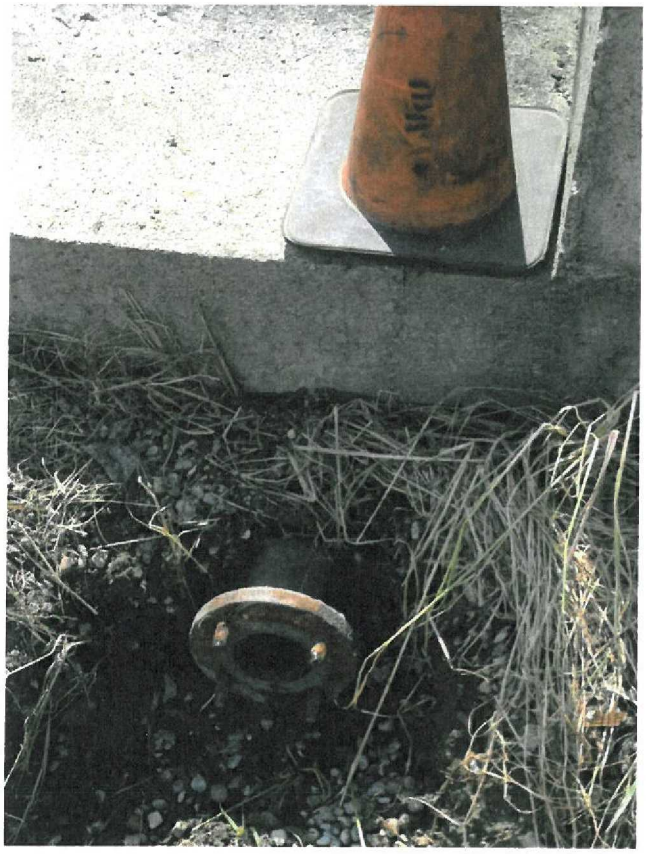
INEOS is in the process of converting a DN process unit from a water bath cutter to an underwater pelletizer during the fourth quarter of 2013. This is captured at outfall 605. In 9 Building, there were two DN units, 1 and 3. As part of this conversion, DN unit 3 will be taken down and replaced with an underwater pelletization process. Instead of resin strands being drawn through an overflowing water bath, the strands will drop out of a head, be cut, and then sprayed with water. The water will be a recirculating zeolite water. The zeolite water tank will be an 800 gallon tank with a purge. Make up water will be added to the tank at a rate of 40 gallons per hour. The tank will be emptied when the unit is taken down approximately twice a year. This would be discharged to the process water sewer, and be discharged through outfall 001. The recirculated water will have a belt filter to remove excess solids as part of the process. This would occur up to once a week, if needed. This should minimally reduce the volume of water discharge from outfall 605 to the "clean" water discharge at outfall 002. A styrene maleic anhydride (SMA) product will be run on this line. DN unit 1 will remain the same. Demolition had begun on this line at the time of the inspection, but not installation. It is tentatively scheduled to be completed in December 2013, but may be delayed to the January/February 2014 timeframe.

During USEPA's inspection in August 2013, the firefighting pits were noted as potential sources of storm water contamination. The pits were cleaned, and were supposed to

have adequate cover to prevent storm water from collecting. Below are pictures of the larger of the two pits on the day of the inspection:

INEOS was told at the time of this inspection this was unacceptable. In addition to potential storm water contamination, this also provided a breeding ground for mosquitoes. After the inspection, the tarps were removed, the pit cleaned and the valve opened to prevent water from ponding. Below are pictures of this:





Before the pit can be used, provisions need to be made prevent storm water contamination.

The cover at the smaller of the two pits was acceptable. Documentation is shown below:

REQUIRED ACTION

INEOS must address the potential for storm water contamination at the large firefighting pit prior to using it. Updated photos, storm water controls, and any other applicable documentation shall be provided to Ohio EPA within seven days of making the changes.