UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 2 1 2017

REPLY TO THE ATTENTION OF:

LU-16J

VIA ELECTRONIC MAIL AND
CERTIFIED MAIL 7016 3010 0000 9203 1140
RETURN RECEIPT REQUESTED

Mr. Christopher Jones, Esq.
Calfee, Halter & Griswold, LLP
1200 Huntington Center
41 South High Street
Columbus, Ohio 43215-3465

Re: Rohm & Haas Facility located at 2000 West Street, Reading, Ohio
EPA ID: OHD 000 724 138
Termination of Administrative Order – Docket No.: RCRA-3013-5-00-01 **RCRA-05-2018-0003**

Dear Mr. Jones:

On July 12, 2016, Dow requested that the U.S. Environmental Protection Agency terminate the Administrative Order it had issued to Dow on August 18, 2000, pursuant to section 3013 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6934 (Order). Dow identified several studies and reports EPA previously approved and provided additional information in support of its termination request. Over the past year, EPA and Dow have exchanged correspondence related to the termination request. The attached Termination Order responds to Dow's requests and identifies the continuing obligations that are imposed on Dow as a result of EPA's termination of the work provisions of the Order. Please contact Mirtha Cápiro of my staff or Richard Clarizio of the Office of Regional Counsel if you have any questions.

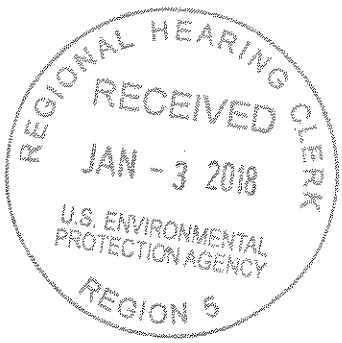
Sincerely,

Michael D. Harris

Michael D. Harris
Acting Division Director
Land and Chemicals Division

Enclosure

ecc : Eric Hagen, Ohio EPA
Andrea Smoktonowicz, Ohio EPA
Carl Coker, The Dow Chemical Company
Joel Visser, The Dow Chemical Company
Matthew Wagner, Tetra Tech, Inc.
Jake Bamberger, QGPOH



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
	)	**RCRA Docket No.: RCRA-3013-5-00-01**
	)	
Morton International, Inc. **2000 West Street** **Reading, Ohio 45215-3431**	)	**RCRA-05-2018-0003**
	)	
EPA ID NO. OHD 000 724 138	)	**PROCEEDING UNDER SECTION**
	)	**3013 OF THE RESOURCE**
	)	**CONSERVATION AND RECOVERY**
Respondent	)	**ACT, 42 U.S.C. § 6934**
	)	

TERMINATION ORDER ACKNOWLEDGING COMPLETION AND SATISFACTION OF REQUIRED WORK, RECORD PRESERVATION RESPONSIBILITIES AND RESERVATION OF RIGHTS

WHEREAS, Morton International, Inc. ("Morton") and Rohm and Haas Chemicals, LLC ("Rohm and Haas") owned and operated a chemical manufacturing facility located at 2000 West Street, Reading, Ohio ("Facility");

WHEREAS, the Facility is subject to Sections 3008(h) and 3013 of the Resource Conservation and Recovery Act ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984, ("HSWA"), 42 U.S.C. §§ 6928(h) and 6934;

WHEREAS, on August 18, 2000, the U.S. Environmental Protection Agency (EPA), Region 5, issued a unilateral order (Order) to Morton under section 3013 of RCRA for monitoring, analysis and testing at defined areas, including impoundments, tanks, swales, seeps to Mill Creek, the sewer system and the groundwater collection systems at the Facility (Attachment 1);

WHEREAS, Rohm and Haas completed a number of reports including, but not limited to, a RCRA Facility Investigation (RFI) Report dated September 2004 and a Baseline Risk Assessment (BRA) Report dated June 2010;

WHEREAS, EPA conditionally approved of the RFI Report on January 25, 2005 and the BRA Report on September 29, 2010. The final BRA Report was submitted on October 22, 2010. EPA's approval and the final BRA Report indicated that additional assessment was required to address the potential for groundwater contamination to migrate to Mill Creek;

pursuant to Section XI, paragraph 74. The record retention period starts on the effective date of this Termination Order, which is the date of signature of this document, and extends 5 years thereafter;

2. EPA reserves all its rights pursuant to RCRA and other applicable law and this document is not a covenant not to sue, or a release, waiver or limitation of any rights, remedies, defenses, powers and/or authorities, civil or criminal, which EPA has under RCRA or any other statutory, regulatory, or common law enforcement authority of the United States;

3. Nothing in this document shall constitute or be construed as a covenant not to sue, a release from any claim, cause of action, demand, or defense in law or equity, against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous waste constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or migrating from the Facility;

4. Nothing in this document is a release of Dow's obligation to comply with applicable local, state or federal laws and regulations.

IT IS SO ORDERED:

EFFECTIVE DATE: 12/21/2017 BY: Michael D. Harris

Michael D. Harris, Acting Director
Land and Chemicals Division
U.S. Environmental Protection Agency
Region 5

Attachment 1: Administrative Order, Docket No.: RCRA-3013-5-00-01RCRA, Section 3013
Attachment 2: Administrative Record Index

Attachment 1

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	**RCRA Docket No.** R 3013-5-00-001
	)	
Morton International, Inc.	)	**RCRA-05-2018-0003**
2000 West Street	)	
Reading, Ohio 45215-3431	)	
	)	
EPA ID No. OHD 000 724 138	)	**PROCEEDING UNDER SECTION**
	)	**3013 OF THE RESOURCE**
Respondent.	)	**CONSERVATION AND RECOVERY**
	)	**ACT, 42 U.S.C. § 6934**

ORDER REQUIRING MONITORING, TESTING, ANALYSIS AND REPORTING

I. JURISDICTION

1. The Administrator of the United States Environmental Protection Agency (EPA) is issuing this Administrative Order (Order) to Morton International, Inc. (Morton) under Section (§) 3013 of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6934. The Administrator has delegated the authority to issue orders under RCRA § 3013 to the Chief, Enforcement and Compliance Assurance Branch; Waste, Pesticides and Toxics Division; U.S. EPA Region 5.

2. Morton International, Inc. (Morton or Respondent) is a corporation organized under the laws of the State of Indiana.

3. On June 30, 1989, the State of Ohio (State) received final authorization pursuant to RCRA § 3006(b), 42 U.S.C. § 6926(b), to operate a hazardous waste program in lieu of the federal hazardous waste program established under RCRA Subtitle C. Pursuant to the Memorandum of Agreement (MOA) between the State of Ohio and EPA, EPA expressly retains its rights to issue Orders and bring actions under § 3013 of RCRA and any other applicable federal statute.

4. This Order is based upon the administrative record compiled by EPA and incorporated herein by reference. The record is available for review by the Respondent and the public at EPA's regional office at 77 West Jackson Boulevard, Chicago, Illinois 60604.

occupied by a fireworks manufacturing facility which later became a winery and smokehouse. Since 1950, the facility has operated as a chemical manufacturing plant that produces additives for the plastic and petroleum industries, including synthetic heat stabilizers and lubricants for rigid polyvinyl chloride, asphalt performance chemicals, antioxidants, plastic lubricants, and specialty chemicals. In addition, the facility has supplied chemical products to the textile, paper, and other miscellaneous industries. Previous owners of the facility include Cincinnati Milling Machine, which conducted business under the name of Carlisle Chemical Works from 1949 to 1970, and later changed its name to Cincinnati Milacron; and Carstab Corporation (Carstab), a division of Thiokol, Inc., from 1980 to 1982. Carstab Corporation merged with Morton International Inc. in 1982. The companies separated in 1989, with Morton retaining ownership of the facility. According to a letter dated April 28, 2000, written by David Kurland, Senior Counsel for Rohm and Haas Company, on June 22, 1999, Morton International Inc. was acquired by Rohm and Haas Company. Mr. Kurland's letter states that although Morton is now a wholly owned subsidiary of Rohm and Haas "the owner and operator of the facility for legal and regulatory purposes continues to be Morton."

12. The facility is currently regulated under RCRA as a generator of hazardous waste. Wastes generated (currently or in the past) on-site include spent halogenated solvents (EPA Hazardous Waste Numbers F001 and F002), spent non-halogenated solvents (EPA Hazardous Waste Numbers F003, F004 and F005), recovered methanol (EPA Hazardous Waste Numbers U154, D001, F001, F003 and F005), liquid methanol by-product (EPA Hazardous Waste Numbers F002, F003 and F005), spent solvents and residues (EPA Hazardous Waste Numbers D001, D002, F002, F003 and F005), spent acidic solvents and residues (EPA Hazardous Waste Numbers D001 and D002), recovered acid layers (EPA Hazardous Waste Number D003), scrubber solutions from pollution control processes (EPA Hazardous Waste Numbers D002 and D003), laboratory wastes (EPA Hazardous Waste Numbers D001, D002, D003, D004, D005, D006, D008, D010, D011, U196, F002, F003 and F005), scrap residues containing arsenic and lead (EPA Hazardous Waste Numbers D004 and D008), filter papers and residues (EPA Hazardous Waste Numbers D001, D002, D004, D006 and D008), press cakes and filter cartridges (EPA Hazardous Waste Numbers D002 and D008), solid and liquid wastes from chemical processes (EPA Hazardous Waste Numbers D001, D002, D003, D004, D008, F003, F002 and F005), and spill cleanup solids (EPA Hazardous Waste Numbers D002, D004, D007, D008).[1]

---

[1] EPA first promulgated regulations on May 19, 1980 (45 Fed. Reg. 33073), for the identification and listing of wastes that are regulated under RCRA as hazardous wastes for purposes of 40 C.F.R. Parts 262 through 265, 268, 270, 271, and 124 (regulatory hazardous wastes). Regulatory hazardous wastes include wastes that are designated by EPA Hazardous Waste Numbers beginning with the letters D, F, K, P and U. EPA Hazardous Waste Numbers D001 through D003 are described in 40 C.F.R. §§ 261.21 through 261.23. EPA Hazardous Waste Numbers D004 through D043 are described in 40 C.F.R. § 261.24. EPA Hazardous Waste Numbers beginning with "F" are listed and described in 40 C.F.R. § 261.31. EPA Hazardous

from the tank from the time it was used as a hazardous waste management unit. See Facility Map from Attachment 1, "Former Neutralization Tank."

18. A concrete storage pad was used as a hazardous waste drum storage area. Hazardous wastes formerly stored in this area included ignitable waste, spent solvents and, potentially, other liquid hazardous wastes generated at the facility. The concrete pad contains several cracks. Morton or the previous owner/operator(s) of the facility have not completed a certification of RCRA closure for this storage area that complies with 40 C.F.R. § 265.111. There are no available data to determine whether there have been any releases from this area from the time it was used as a hazardous waste storage unit. See Facility Map from Attachment 1, "Former Drum Storage Area."

19. A 10,000-gallon steel aboveground tank was formerly used for storage of hazardous waste, including high pH wastewaters generated by the sulfurizing of fats and oils. The waste was periodically shipped off-site for disposal. The tank is currently used for storing fuel oil. Morton or the previous owner/operator(s) of the facility have not completed a certification of RCRA closure for this tank that complies with 40 C.F.R. § 265.111. There are no available data to determine whether there have been any releases from this tank from the time it was used as a hazardous waste management unit. See Facility Map from Attachment 1, "Former Sulfide Waste Treatment Tank."

20. A groundwater collection system is in place at the facility. This system consists of four components: a french drain, an extraction well, a collection sump and a concrete slurry wall. Contaminated groundwater containing VOCs, semivolatile organic compounds (SVOCs), metals, and, potentially, other contaminants is extracted from the subsurface and transferred to a groundwater treatment unit. A large portion of the treated groundwater is recirculated as make-up water in the facility's recirculating non-contact cooling water system. The remainder of the treated water is discharged to the Municipal Sewer District of Greater Cincinnati (MSDGC). The purpose of the groundwater collection system is to prevent contaminated groundwater from migrating off the site and into Mill Creek. Due to the facility lacking a ground-water monitoring program, there are no groundwater data available to evaluate the effectiveness of the groundwater collection system. See Facility Map from Attachment 1; "French Drain", "Extraction Well", "Collection Sump", and "Concrete Slurry Wall."

21. The facility's wastewater enters a combined sewer system that flows to a pH control system and ultimately discharges to the MSDGC (the facility's wastewater includes a combination of specialty chemical process streams, wash down, cooling water, boiler plant blowdown, sanitary waste, and storm water runoff). The combined sewer system includes floor trenches and weir pits. Prior to the installation of the pH control system in 1993, the combined sewer system discharged directly to the MSDGC and portions of the unit may have potentially discharged to the former surface impoundments. Based on a July 8, 1998, Preliminary Assessment/Visual Site Inspection (PA/VSI) Report from

(B) Hazardous wastes exhibiting the characteristic of ignitability, corrosivity, reactivity, and toxicity identified at 40 C.F.R. §261.21 through 261.24, including D001, D002, D003, and D000 (the type of toxicity was not specified); and

(C) Other listed materials may occasionally be disposed of in small quantities from laboratory operations.

25. Carstab submitted to EPA a RCRA Part A application dated November 13, 1980, that identified the following hazardous wastes at the facility (hazardous waste was managed as follows: container storage (S01), 350,000 gallons capacity; tank storage (S02), 17,000 gallons capacity; and tank treatment (T01), 59,000 gallons per day):

(A) Hazardous wastes from non-specific sources identified at 40 C.F.R. §261.31 including F001 (spent halogenated solvents), F003, F004, and F005 (spent non-halogenated solvents);

(B) Hazardous wastes exhibiting the characteristic of ignitability, corrosivity, reactivity, and toxicity identified at 40 C.F.R. §261.21 through 261.24, including D001, D002, D003, and D000 (the type of waste toxicity was not specified).

26. In a March 31, 1982, letter to Carstab, EPA requested submission of a RCRA Part B application for the facility.

27. In a September 14, 1982, letter, Carstab notified EPA of its decision to revert to generator status effective October 1, 1982.

28. On April 1, 1985, the Ohio Environmental Protection Agency (OEPA) issued a letter to Dr. Raymond Phillips of Carstab confirming that the Hazardous Waste Activity Status for the facility was that of generator only with less than ninety (90) day storage.

29. On June 29, 1989, EPA received a Notification of Hazardous Waste Activity from Morton, dated June 26, 1989, which indicated the change in ownership of the facility to Morton International, Inc. In addition, Morton identified itself as a generator only with less than ninety (90) day storage. Four wastes from nonspecific sources were included: F001, F002 (spent halogenated solvents), F003, and F005 (spent non-halogenated solvents). Four wastes exhibiting characteristics of Non-Listed Hazardous Wastes were included: D001 (ignitable), D002 (corrosive), D003 (reactive), and D000 (characteristic of toxicity--the type of waste toxicity was not specified).

30. Morton currently stores hazardous waste for less than ninety (90) days in a Hazardous Waste Storage Area. The Hazardous Waste Storage Area is not a study area at the facility.

36. The analytical results from sediment sampling revealed the presence of VOCs, SVOCs, and metals in sediments including the following (concentration values in parenthesis): benzo(a)anthracene (370 ppb), benzo(a)pyrene (440 ppb), benzo(k)fluoranthene (400 ppb), bis(2-ethylhexyl)phthalate (500 ppb), 2-butanone (180 ppb), chlorobenzene (54 ppb), ethylbenzene (82 ppb), fluoranthene (1,000 ppb), phenanthrene (540 ppb), pyrene (740 ppb), xylenes (82 ppb), and vanadium (17.9 ppb). Concentration values in parenthesis are estimated with the exception of those from fluoranthene and vanadium.

37. All of the examples of SVOCs cited above are also known as polycyclic aromatic hydrocarbons (PAHs) with the exception of bis(2-ethylhexyl)phthalate.

- **1993 CERCLA Expanded Site Inspection Report**

38. Based on a May 7, 1993, CERCLA Expanded Site Inspection (ESI) Report for Carstab prepared for EPA by PRC Environmental Management, Inc. (PRC), PRC collected samples from groundwater and soil from various areas of the facility in order to document any observed releases, levels of contamination, and attribution of hazardous substances. Also, PRC collected sediment samples on the eastern bank of Mill Creek adjacent to the facility. The samples were analyzed for EPA TCL VOCs, SVOCs, pesticides, and PCBs. Also, the samples were analyzed for EPA TAL metals and cyanide.

39. Groundwater samples were collected only from the upper aquifer.

40. Analytical results from the groundwater sampling revealed the presence of VOCs, SVOCs, and metals in groundwater, including the following (maximum concentration values in parenthesis): acetone (2,700 ppb), benzene (48 ppb), chlorobenzene (2,300 ppb), 1,2-dichlorobenzene (4,700 ppb), 1,4-dichlorobenzene (640 ppb), ethylbenzene (110 ppb), nickel (57.7 ppb), toluene (630 ppb), vanadium (14.6 ppb), and xylene (360 ppb).

41. Analytical results from soil sampling revealed the presence of SVOCs, PCBs, and metals in soil, including the following (maximum concentration values in parenthesis): Aroclor 1254 (1,000 ppb as estimated), dibenzo(a,h)anthracene (900 ppb), benzo(a)pyrene (7,600 ppb), benzo(g,h,i)perylene (3,300 ppb), bis(2-ethylhexyl)phthalate (1,200 ppb), indeno(1,2,3-c,d)pyrene (3,600 ppb), and vanadium (29.3 ppb).

42. Analytical results from sediment sampling conducted at a location adjacent to the former surface impoundments (location S-12), revealed the presence of VOCs, SVOCs, PCBs, and metals in sediments, including the following (concentration values in parenthesis): Aroclor 1254 (120 ppb), benzo(a)anthracene (360 ppb), benzo(a)pyrene (320 ppb), benzo(g,h,i)perylene (280 ppb), benzo(k)fluoranthene (310 ppb), bis(2-ethylhexyl)phthalate (210 ppb), chlorobenzene (16 ppb), chrysene (410 ppb), fluoranthene (970 ppb), indeno(1,2,3-c,d)pyrene (260 ppb), phenanthrene (540 ppb),

46. According to a July 8, 1998, PA/VSI Report prepared for EPA by TechLaw: "releases to soil and groundwater are documented at the Former Surface Impoundments (SWMU 1) and the Former Swale Area (SWMU 10), resulting in the designation of a high release potential for these units. The Groundwater Collection System (SWMU 6) and Groundwater Treatment Unit (SWMU 1) were installed to collect and treat contaminated groundwater and prevent off-site migration of contaminants through the shallow aquifer. Thus, although the release potential is high for SWMU 1 and 10, the facility has apparently implemented measures to prevent off-site migration of hazardous constituents through shallow groundwater. The effectiveness of the Groundwater Treatment Unit (SWMU 7) in removing contaminants should be analyzed, however, in order to ensure that the treated water does not pose a further threat of contamination. In addition, since it appears that deeper portions of the aquifer are used for domestic purposes in the vicinity of the Morton facility, potential contaminant migration from the Former Surface Impoundments (SWMU 1) and Former Swale Area (SWMU 10) to the deeper portions of the aquifer should be investigated. Furthermore, it is recommended that sediments in Mill Creek (adjacent to the facility) be investigated to determine the extent of impacts from past contaminated leachate releases associated with the Former Surface Impoundments (SWMU 1)." Also, the report indicates that "The Combined Sewer System (SWMU 11) was not directly observed during the VSI, and the construction and exact location were not confirmed by Morton representatives. Additional information regarding the Combined Sewer System (SWMU 11) should be provided by Morton representatives so that the potential for release from the unit can be determined."

Effects on Human Health or the Environment

47. The constituents identified as present at the site by the CERCLA inspections, as described above in paragraphs 32- 43 may cause the following effects on human health or the environment:

(A) Acetone: Dermal absorption and inhalation are the main routes of exposure to acetone. Acute (short-term) exposure can cause dizziness and/or loss of consciousness. Chronic (long-term) exposure may damage the liver and kidneys. Acetone has a slight chronic and acute toxicity to aquatic life.

(B) Arsenic: Arsenic is a known carcinogen, and a potential teratogenic agent. Its main path of exposure to humans is through inhalation and dermal absorption. Long term exposure can cause nerve and liver damage, narrowing of the blood vessels, and affect red blood cell production. Arsenic in the presence of acid may release a deadly gas, arsine. Potential health effects from ingestion include skin damage; circulatory system problems, and increased risk of cancer. Arsenic has high acute toxicity to aquatic life, birds, and land animals. It has a low solubility in water and is

(I) Ethylbenzene: Very high acute exposures can cause trouble breathing, paralysis, and death. There is some evidence to suggest ethylbenzene may damage a developing fetus. High chronic exposure may cause liver damage. Ethylbenzene has a high chronic and acute toxicity to aquatic life. Ethylbenzene is a component of petroleum and is sometimes used as a solvent.

(J) Nickel: Nickel carbonyl is the most acutely toxic form of nickel in humans, with the lung and the kidney as the target organs. Symptoms such as headache, vomiting, chest pains, dry coughing, and visual disturbances have been reported from acute inhalation exposure in humans. Contact dermatitis, consisting of itching of the fingers, wrists, and forearms, is the most common effect in humans from long-term nickel exposure. Respiratory effects, such as asthma and an increased risk of chronic respiratory infections, have also been reported in humans from inhalation exposure to nickel.

(K) Polychlorinated Biphenyls (PCBs): Aroclor 1254 is a chlorobiphenyl, one of the primary chemicals in PCBs, named according to the percentage of chlorine in the mixture (54%). Others include aroclor 1242, 1248, and 1260. The main path of exposure to humans is through inhalation and dermal absorption. Short-term exposure to PCBs can damage the liver. Chronic exposures pose cancer risks, possible liver damage, and damage to the nervous system. Dermal and ocular effects, including skin irritation, chloracne, hyperpigmentation and eyelid and conjunctival irritation, have been observed in humans occupationally exposed to aroclor 1254 and other aroclor formulations. Acute toxic effects of PCBs in the environment may include death of animals, birds, or fish. PCBs have high chronic toxicity to aquatic life, and are known to bioaccumulate in fish.

(L) Polycyclic aromatic hydrocarbons (PAHs): PAHs are a group of over 100 different chemicals that are present in the heavy fraction of petroleum distillate and produced from the incomplete burning of coal, petroleum and other organic substances. Acenaphthene can cause liver and kidney damage at high levels. Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and indeno(1,2,3-c,d)pyrene and others are human carcinogens. Carbazole and chrysene are possible human carcinogens. In addition, laboratory mice ingesting benzo(a)pyrene developed birth defects. Acenaphthylene, benzo(a)anthracene, benzo(k)fluoranthene, and phenanthrene may be mutagenic. Carbazole is capable of causing death or permanent injury due to exposures of normal use. It can be incapacitating and poisonous and requires special handling. PAHs tend to combine with dust and are carried

52. § 1004(5) of RCRA, 42 U.S.C. § 6903(5), defines the term "hazardous waste" to mean:

> a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may-
>
> > (A) cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
> >
> > (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

53. § 1004(3) of RCRA, 42 U.S.C. § 6903(3), defines the term "disposal" to mean "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters."

V. FINDING OF SUBSTANTIAL HAZARD

Upon the basis of the foregoing Findings of Fact, and pursuant to § 3013(a) of RCRA, 42 U.S.C. § 6934(a), EPA makes the following determinations:

54. Hazardous wastes within the meaning of § 1004(5) of RCRA, 42 U.S.C. § 6903(5), are present at the facility and were treated, stored or disposed there.

55. The presence of hazardous wastes at the facility and/or the release of hazardous wastes from the facility may present a substantial hazard to human health or the environment.

56. The action required by this Order are reasonable to ascertain the nature and extent of such hazard.

VI. ORDER

57. Based on the Findings of Fact, Conclusions of Law and Findings of Substantial Hazard as set forth above, Respondent is hereby ordered, pursuant to § 3013 of RCRA, 42 U.S.C. § 6934, to submit three (3) copies of a written proposal to EPA within thirty (30) days from the issuance of this Order, for carrying out monitoring, testing, analysis, and reporting in order to ascertain the nature and extent of the hazard posed by the hazardous wastes that are present at or that may have been released from the study areas at the Respondent's facility. The facility's study areas are identified and described in Section III of this Order under "Description of Study Areas". Respondent is hereby ordered to implement such proposal once approved, or modified and approved, by EPA. Respondent is hereby

area, and the combined sewer system. The plan shall include the number, location, depth of samples, the analysis parameters, and quality assurance measures.

(E) a leachate and run-off sampling and analysis work plan, including schedule and proposal for progress reports, to determine the nature and extent of contaminated leachate and run-off flowing into Mill Creek from portions of the facility adjacent to and downstream from the former surface impoundments, the former neutralization tank, the former drum storage area, the former sulfide waste treatment tank, the former swale area and the combined sewer system. The plan shall include the number, location, depth of samples, the analysis parameters, and quality assurance measures.

(F) a groundwater sampling and analysis work plan, including schedule and proposal for progress reports, to characterize the groundwater quality and the extent of any groundwater contamination, both vertically and horizontally, which may exist in, around or on the former surface impoundments, the former neutralization tank, the former drum storage area, the former sulfide waste treatment tank, the former swale area and the combined sewer system. The plan shall include the number, location and frequency of samples to be taken, the analysis parameters, and quality assurance measures.

58. Each of the required work plans described above shall be designed to define the nature, location, extent, direction and rate of movement of any hazardous wastes or hazardous waste constituents which are present at or have been released from the facility. Each work plan shall document the procedures the Respondent shall use to conduct the investigations necessary: (1) to characterize the potential pathways of migration of hazardous waste and hazardous waste constituents; (2) characterize the sources of hazardous waste and/or hazardous waste constituent contamination; (3) define the degree and extent of hazardous waste and/or hazardous constituent contamination; and (4) identify actual or potential receptors.

59. Respondent shall insure that laboratories used by Respondent for analyses perform such analyses according to the EPA methods included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be proposed, Respondent shall submit all protocols to be used for analysis to EPA at least thirty (30) calendar days prior to the commencement of the analyses. Respondent shall also ensure that laboratories used by

direction of EPA, to take any action required by any non-deficient portion of the submission.

65. Within ten (10) days following EPA approval, or approval with modifications, of the a plan, Respondent shall implement the approved document.

66. All plans, reports, and/or other submittals required by this Order are, upon approval or approval with modifications by EPA, incorporated into this Order as if fully set forth in text herein. Any noncompliance with such EPA-approved plans, reports, specifications, schedules, and attachments shall be noncompliance with this Order. Oral advice or approvals given by EPA representatives shall not relieve Respondent of its obligation to obtain any formal, written approvals required by this Order.

67. In all instances which this Order requires written submissions to EPA, each submission must be accompanied by the following certification signed by a "responsible official":

> I certify that the information contained in or accompanying this submission is true, accurate, and complete.

For the purpose of this certification, a "responsible official" means a person in charge of a principal facility function, or any other person who performs similar decision-making functions for the facility.

VIII. PROJECT COORDINATORS

68. EPA hereby designates as its Project Coordinator:

Mirtha Capiro
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard, DE-9J
Chicago, IL 60604

69. Within ten (10) calendar days of Respondent's receipt of this Order, Respondent shall designate a Project Coordinator and submit the designated Project Coordinator's name, address, and telephone number in writing to EPA.

70. Each Project Coordinator shall, on behalf of the party that designated that Project Coordinator, oversee the implementation of this Order and function as the principal project contact.

71. Respondent shall provide EPA with a written notice of any change in its Project Coordinator. Such notice shall be provided at least seven (7) calendar days prior to the change in Project Coordinator.

XII. RECORD PRESERVATION

78. Respondent shall retain, during the pendency of this Order and for a minimum of five (5) years after its termination, a copy of all data, records, and documents now in its possession or control, or in the possession of control of its contractors, subcontractors, representatives, or which come into the possession of control of the Respondent, its contractors, subcontractors, or representatives, which relate in any way to this Order. Respondent shall notify EPA, in writing, at least ninety (90) days in advance of the destruction of any such records, and shall provide EPA with the opportunity to take possession of any such records. Such written notification shall reference the caption, docket number and date of issuance of this Order and shall be addressed to:

Chief
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division
EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

In addition, Respondent shall provide data, records and documents retained under this Section at any time before the expiration of the five year period at the written request of EPA.

XIII. INFORMATION SUBMITTED TO EPA

79. Any information that Respondent is required to provide or maintain pursuant to this Order is not subject to the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 et seq.

80. Respondent may assert a business confidentiality claim in the manner described in 40 C.F.R. § 2.203(b) covering all or part of any information submitted to EPA pursuant to this Order. Any assertion of confidentiality shall be adequately substantiated by Respondent when the assertion is made in accordance with 40 C.F.R. § 2.204(e)(4). Information submitted for which Respondent has asserted a claim of confidentiality as specified above shall be disclosed by EPA only to the extent and manner permitted by 40 C.F.R. Part 2, Subpart B. If no such confidentiality claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to the Respondent.

XIV. RESERVATION OF RIGHTS

81. EPA expressly reserves all statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, including any which may pertain to Respondent's failure to comply with any of the requirements of this Order, specifically including, without

87. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts of omissions of Respondent or its agents, contractors, subcontractors or other representatives.

88. Neither the United States nor EPA shall be a party or be held out as a party to any contact entered into by the Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out activities pursuant to this Order.

XVII. SUBSEQUENT MODIFICATION OF ORDER

89. Except as provided in paragraphs 72 and 90, this Order may only be modified by written amendment signed by the Branch Chief or the Regional Administrator, EPA, Region 5.

90. Modifications in any schedule adopted pursuant to this Order may be made in writing by EPA's Project Coordinator.

91. No informal advice, guidance, suggestions, or comments by EPA shall be construed to modify the requirements of this Order. Routine communications exchanged verbally, in person or by telephone, between the parties to facilitate the orderly conduct of work contemplated by this Order shall not alter or waive any rights and/or obligations of the parties under this Order.

XVIII. STATEMENT OF SEVERABILITY

92. If any provision or authority of this Order, or the application of this Order to any party or circumstances, is held by any judicial or administrative authority to be invalid, the application of such provisions to other Parties or circumstances and the remainder of the Order shall not be affected thereby.

XIX. TERMINATION AND SATISFACTION

93. Respondent may seek termination of this Order by submitting to EPA a written document which indicates Respondent's compliance with all requirements of this Order, and the associated dates of approval correspondence from EPA.

94. The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated to the satisfaction of EPA that the terms of the Order, including any additional tasks determined by EPA to be required pursuant to this Order, have been satisfactorily completed. This notice shall not, however, terminate Respondent's obligations to comply with any continuing obligations

XXI. POTENTIAL CONSEQUENCES OF FAILURE TO COMPLY

99. In the event Respondent fails or refuses to comply with the terms and provisions of this Order, EPA may commence a civil action in accordance with § 3013(e) of RCRA, 42 U.S.C. § 6934(e), to require compliance with such Order and to assess a civil penalty (consistent with 40 C.F.R. Part 19) not to exceed $5,500 for each day during which such failure or refusal occurs.

100. If EPA determines that Respondent is not able to conduct the activities required by this Order in a satisfactory manner, or if actions carried out are deemed unsatisfactory, then EPA or its representatives may conduct such actions deemed reasonable by EPA to ascertain the nature and extent of the hazard at the property and/or facility of Respondent. EPA or its representatives may then order Respondent to reimburse the costs of such activity pursuant to § 3013(d) of RCRA, 42 U.S.C. § 6934(d).

XXII. EFFECTIVE DATE/DATE OF ISSUANCE

101. The effective date of this Order is the date it is signed by the Branch Chief. The date of issuance of this Order shall be the same date as the effective date.

IN THE MATTER OF MORTON INTERNATIONAL, INC.
2000 West Street
Reading, Ohio 45215-3431

IT IS SO ORDERED

Joseph M. Boyle

Joseph Boyle, Chief
Enforcement & Compliance Assurance Branch
Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency/ Region 5

August 18, 2000
Date

ATTACHMENT 2

REFERENCES
MORTON INTERNATIONAL, INC.
READING, OHIO
U.S. EPA ID No. OHD 000 724 138

The following list identifies guidance documents, in addition to those documents already referenced in the Order, and other information which may be useful to Morton International, Inc. in implementing the Order. This list is not exhaustive in that it does not include every guidance document applicable to work performed under a RCRA §3013 Administrative Order.

"*Health and Safety Requirements of Employees Employed in Field Activities*," EPA Order 1440.2, July 12, 1981.

"*RCRA Ground-Water Monitoring Technical Enforcement Guidance Document (TEGD)*," OSWER Directive 9950.1, September 1986.

"*RCRA Facility Assessment (RFA) Guidance*," EPA/530/SW-86/053, October 1986.

"*Data Quality Objectives for Remedial Response Activities*," EPA/540/G-87/003 & 004, OSWER Directive 9335.0-7B, March 1987.

"*Alternate Concentration Limit Guidance, Part 1: ACL Policy and Information Requirements*," Interim Final, OSWER Directive 9481.00-6C, July 1987.

"*A Compendium of Superfund Field Operations Methods*," Two Volumes, EPA/540/P-87/001a&b, OSWER Directive 9355.0-14, August 1987.

"*Technology Screening Guide for Treatment of CERCLA Soils and Sludges*," EPA/540/2-88/004, September 1988.

"*Ground-Water Modeling: An Overview and Status Report*," EPA/600/2-89/028, December 1988.

"*Risk Assessment Guidance for Superfund, Volume II: Environmental Evaluation Manual*," Interim Final, EPA/540/1-89/001, March 1989.

"*Ecological Assessment of Hazardous Waste Sites: A Field and Laboratory Reference Document*," EPA 600/3-89/013, March 1989.

"*Standard Guide for Risk Based Corrective Action Applied to Petroleum Release Sites*," ASTM E-1739-95, November 1995. (As approved by Region 5 guidance policy)

"*Conducting Risk-Based Corrective Action for Federally-Regulated UST Petroleum Releases*," U.S. EPA, Region 5, December 7, 1995.

"*Sitting at the RCRA Data Quality Level Table, Update 1*," U.S. EPA, Region 5, Memorandum, December 14, 1995.

"*Soil Screening Guidance: Users Guide*," OSWER Publication 9355.4-23, April 1996.

"*Soil Screening Guidance: Technical Background Document*," EPA/540/R-95/128, May 1996.

"*Region 5 Ecological Data Quality Levels*," Final Report, August 26, 1996.

"*EPA's Proposed Guidelines for Ecological Risk Assessment*," 61 Fed. Reg. 47552, September 9, 1996. (Note: Final document to be released in early-1998.)

"*Ecological Data Quality Levels, RCRA Appendix IX Hazardous Constituents*," U.S. EPA, Region 5, Draft Report, August 18, 1997.

Attachment 2

INDEX TO EPA ADMINISTRATIVE RECORD
Former Rohm and Haas Chemicals LLC Facility - EPA ID No OHD 000 724 138

Date	Author	Recipient	Format	Title/Subject
August 8, 1980	Carstab Corporation	EPA	Notification	Notification of Hazardous Waste Activity
November 13, 1980	Carstab Corporation	EPA	Application	RCRA Part A Application
September 19, 1983	Carstab Corporation	EPA	Letter	Status Change from Transfer/Storage/Disposal to Generator
June 26, 1989	Morton International Inc	EPA	Notification	Notification of Hazardous Waste Activity
July 8, 1998	TechLaw Inc.	EPA	Report	Preliminary Assessment/Visual Site Inspection
March 28, 2000	EPA	Morton International Inc	Letter	RCRA Section 3008(h) Order
April 28, 2000	Morton International Inc	EPA	Letter	RCRA Section 3008(h) Order
August 18, 2000	EPA	Morton International Inc	Letter	Administrative Order under Section 3013 of RCRA
August 18, 2000	EPA	Morton International Inc	Administrative Order	Proceeding under Section 3013 of RCRA
September 26, 2000	Geomatrix Consultants, Inc	EPA	Report	Current Conditions Report
November 15, 2000	Geomatrix Consultants, Inc	EPA	Work Plan	Facility Investigation Work Plan
September 30, 2003	EPA	Public	Documentation	RCRA Corrective Action Environmental Indicator - Current Human Exposures Under Control CA725
September 30, 2003	EPA	Public	Documentation	RCRA Corrective Action Environmental Indicator - Migration of Contaminated Groundwater Under Control CA750
December 1, 2003	Geomatrix Consultants, Inc	EPA	Work Plan	Supplemental Facility Investigation Work Plan
September 1, 2004	Geomatrix Consultants, Inc	EPA	Report	Revised Facility Investigation Report
December 17, 2004	Rohm and Haas Chemicals LLC	EPA	Letter	Morton International Inc - Ownership transfer
January 25, 2005	EPA	Rohm and Haas Chemicals LLC	Letter	Revised Facility Investigation Report and Request for Additional Work
May 18, 2006	US Geological Survey	EPA	Technical Memorandum	Stratigraphic Interpretation of Well Logs
June 1, 2007	Parsons	EPA	Report	2006 Site-Wide Groundwater Sampling Report
March 1, 2008	Parsons	EPA	Report	2007 Site-Wide Groundwater Sampling Report
December 9, 2008	Rohm and Haas Chemicals LLC	EPA	Letter	Rohm and Haas Chemicals LLC - Ownership transfer
June 1, 2009	Parsons	EPA	Report	2008 Site-Wide Groundwater Sampling Report
March 1, 2010	Parsons	EPA	Report	2009 Site-Wide Groundwater Sampling Report
September 29, 2010	EPA	Rohm and Haas Chemicals LLC	Letter	Revised Baseline Risk Assessment
October 10, 2010	Parsons	EPA	Report	Revised Baseline Risk Assessment, Rohm and Haas Chemicals LLC
March 1, 2011	Parsons	EPA	Report	2010 Site-Wide Groundwater Sampling Report
September 25, 2012	Rohm and Haas Chemicals LLC	EPA	Letter	Replacement Page for Revised Baseline Risk Assessment Report
February 4, 2013	Dow Chemical Company	EPA	Letter	Rohm and Haas Chemicals LLC - Ownership transfer
April 1, 2013	Parsons	EPA	Report	2012 Site-Wide Groundwater Sampling Report
April 22, 2013	Dow Chemical Company	EPA	Report	Evaluation of Shutdown of Groundwater Recovery System
July 12, 2016	Dow Chemical Company	EPA	Letter	Rohm and Haas Chemicals LLC
July 29, 2016	City of Reading, Mayor	EPA	Letter	Former Rohm and Haas site (Dow Chemical Company)
August 24, 2016	EPA	City of Reading, Mayor	Letter	Former Rohm and Haas site (Dow Chemical Company)
October 12, 2016	Congressman Brad Wenstrup	EPA	Letter	Control Number AL-17-000-0362
November 10, 2016	EPA	Congressman Brad Wenstrup	Letter	Response to Control Number AL-17-000-0362
December 9, 2016	EPA	QGPOH	Letter	Status letter - Former Rohm and Haas Chemicals LLC
December 16, 2016	EPA	Congressman Brad Wenstrup	Letter	Former Rohm and Haas Chemicals LLC; Update -Control Number AL-17-000-0362
February 17, 2017	Parsons	EPA	Report	2016 Site-Wide Groundwater Sampling Report
April 4, 2017	EPA	QGPOH	Letter	Revised Draft Figure of Potential Institutional Controls
April 5, 2017	EPA	Dow Chemical Company	Letter	Revised Draft Figure of Potential Institutional Controls
April 17, 2017	QGPOH/TetraTech	EPA	Plan	QGPOH - Bldg 40 Soil Gas and Indoor Air Sampling and Analysis Plan Approval of Sampling and Analysis Plan - Vapor Intrusion
April 20, 2017	EPA	QGPOH/TetraTech	Email	Characterization - Building 40
April 25, 2017	Jennifer Dodds - EPA	Mirtha Capiro - EPA	Technical Memorandum	Sediment Evaluation
June 6, 2017	QGPOH/TetraTech	EPA	Report	QGPOH - Bldg 40 Soil Gas and Indor Air Evaluation Results Report Former Rohm and Haas Chemicals LLC; Follow up to
June 7, 2017	EPA	Dow Chemical Company	Letter	March 14, 2017 Meeting and Next Steps Approval of Report - Vapor Intrusion
June 9, 2017	EPA	QGPOH/TetraTech	Email	Characterization - Building 40
June 15, 2017	EPA	Congressman Brad Wenstrup	Letter	Former Rohm and Haas Chemicals LLC; Update - Control Number AL-17-000-0362
July 28, 2017	Dow Chemical Company	EPA	Letter	Response to Comments Received June 7, 2017
November 6, 2017	EPA	Dow Chemical Company	Letter	Response to July 28, 2017, letter from Dow Chemical Company

In the matter of: **Rohm & Hass Facility**
OHD 000 724 138
Docket Number:
RCRA-05-2018-0003

CERTIFICATION OF SERVICE

I certify that a true and correct copy of the forgoing ***Administrative Order on Consent*** was sent this day in the following manner to the addressees:

Copy by Certified Mail
Return-receipt:

Certified Mail # 7016 3010 0000 9203 1140
Mr. Christopher Jones, Esq.
Calfee, Halter & Griswold, LLP
1200 Huntington Center
41 South High Street
Columbus, Ohio 43215-3465

Copy by e-mail to
Regional Judicial Officer

Ann Coyle
coyle.ann@epa.gov

Dated: Jan 3, 2018

Kajsa A Johnson
Remediation and Reuse Branch, Region 5