

North Carolina Department of Labor
Division of Occupational Safety and Health
Raleigh, North Carolina

Field Information System

Operational Procedure Notice 107
SN/OPN Manual

Subject: Enforcement Guidelines for the Hazardous Chemicals Right to Know Act

A. **Purpose and Scope:**

The Hazardous Chemicals Right to Know Act (NCGS Chapter 95, Article 18, hereinafter "RTK Act") was enacted in 1985 by the North Carolina General Assembly. The Act requires an employer who "normally stores at a facility any hazardous chemical in an amount of at least 55 gallons or 500 pounds" to provide a copy of a *written* Hazardous Substance List to the fire department for the jurisdiction where the facility is located. The authority to inspect and investigate complaints of violations of the RTK Act was given to the Commissioner of Labor. This document serves as a directive for enforcement of the RTK Act by the Division of Occupational Safety and Health.

A copy of the RTK Act is attached (Original filing). Additional copies are available from the Education, Training, and Technical Assistance Bureau.

B. **Action:**

Pursuant to NCGS 95-194, each employer is required to provide a simple written Hazardous Substance List to the Fire Chief of the fire department having jurisdiction over the facility. In addition to listing hazardous substances, it must also state the name(s) and telephone number(s) of knowledgeable employer representatives in case of an emergency. Generally, a list should be updated quarterly, but the list **must** be updated on an annual basis. If the employer goes through a significant change [the list is added to, deleted from, or the quantity changes sufficiently enough for the chemical(s) to be in a different class under G.S.95-191(a)(2)], then the list should be updated within 30 days of such a change. Employers may use information specified by the Superfund Amendments and Reauthorization Act of 1986 (*a.k.a.* SARA, Title III) as a substitute for the Hazardous Substance List.

Employers have 14 days following receipt of written notices of violation to correct a violation of the RTK Act. Employers who do not come into compliance in that 14-day period are subject to a maximum civil penalty of \$1000 per violation per day.

C. **Enforcement:**

Enforcement of the RTK Act will proceed based only upon complaints received by the Division of Occupational Safety and Health. If a complaint is received by OSH regarding a violation of the RTK Act, the inspection will be handled by the Bureau of Health Compliance. The inspecting Health Compliance officer may expand the inspection to a full inspection based on current policy if other violations are in plain sight, etc. Upon finding an actual violation of the RTK Act, the inspecting Health Compliance officer shall provide the employer with a copy of the attached Order. The Order must be dated by the compliance officer and signed by the employer. The Order will serve as the required written notification to the employer of a violation of the RTK Act. The inspecting compliance officer **must** follow-up on the fifteenth day after providing the Order by contacting the appropriate fire department to verify that the employer has provided the required information. If the employer has not complied with the statutory requirements, the compliance officer will report this information to his or her supervisor. On the fifteenth day, a letter should be mailed notifying the employer that it has been verified that he or she is/are not in compliance, and that fines are being incurred from that day forward until the written Hazardous Substance List is provided to the appropriate fire department. Supervisors have the authority to begin penalizing employers on the fifteenth day.

If you have any questions regarding the Hazardous Chemicals Right to Know Act, contact the Right to Know Education & Training Specialist, Joe Bailey.

May 13, 1996
Date of Signature

(Signed on Original)
Charles N. Jeffress,

Director of Occupational
Safety and Health

Attached ORDER

ORDER

**YOU HAVE BEEN FOUND TO BE IN VIOLATION OF THE
HAZARDOUS CHEMICALS RIGHT TO KNOW ACT** (Chapter 95, Article 18 of the
North Carolina General Statutes).

You currently store hazardous materials which are subject to this Act at

_____(location/address).

A copy of the Act is being provided to you. You are required to submit a written list of all
hazardous chemicals found at this location to the fire department that would respond to this facility in event
of a fire or emergency situation. **You must provide the written list immediately.** The list should be
updated on a quarterly basis and must be updated annually.

Failure to submit this written list to the local fire department **within 14 days of this date** will
result in the assessment of fines in the amount of \$1,000 per violation per day.

This Order is your first and only notice of violation of the Act. If you do not comply within the
specified 14 day period, fines will be assessed beginning on the 15th day from the date below.

This the _____ day of _____, 19_____.

RECEIVED BY: _____
(Print full name of Employer/Owner)

(Signature of Employer/Owner)

PROVIDED BY: _____
(Print full name of Compliance Officer)

(Signature of Compliance Officer)

ARTICLE 18.

Identification of Toxic or Hazardous Substances.

PART 1. General Provisions.

§95-173. Short title.

This Article shall be cited as the Hazardous Chemicals Right to Know Act. (1985, c. 775, s. 1.)

§ 95-174. Definitions.

- (a) "Chemical manufacturer" shall mean a manufacturing facility classified in Standard Industrial Classification (SIC) Codes 20 through 39 where chemicals are produced for use or distribution in North Carolina.
- (b) "Chemical name" shall mean the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC), or the Chemical Abstracts Service (CAS) rules of nomenclature or a name, which will clearly identify the chemical for the purpose of conducting a hazard evaluation.
- (c) "Common name" shall mean any designation or identification such as a code name, code number, trade name, and brand name or generic name used to identify a chemical other than by its chemical name.
- (d) "Distributor" shall mean any business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to purchasers.
- (e) "Employee" shall mean any person who is employed by an employer under normal operating conditions.
- (f) "Employer" means a person engaged in business who has employees, including the State and its political subdivisions but excluding an individual whose only employees are domestic workers or casual laborers who are hired to work at the individual's residence.
- (g) "Facility" shall mean one or more establishments, factories, or buildings located at one contiguous site in North Carolina.
- (h) "Fire Chief" shall mean Fire Chief or Fire Marshall, or Emergency Response Coordinator in the absence of a Fire Chief or Fire Marshall for the appropriate local fire department.
- (i) Repealed by Session Laws 1987, c. 489, s. 1.
- (j) "Fire Department" shall mean the fire department having jurisdiction over the facility.
- (k) "Hazardous chemical" shall mean any element, chemical compound or mixture of elements and/or compounds which is a physical hazard or health hazard as defined in subsection (c) of the OSHNC Standard or a hazardous substance as defined in standards adopted by the Occupational Safety and Health Division of

the North Carolina Department of Labor in Title 13, Chapter 7 of the North Carolina Administrative Code (13 NCAC 7).

- (l) "Hazardous Substance List" shall mean the list required by G.S. 95-191.
- (m) "Hazardous substance trade secret" means any formula, plan, pattern, device, process, production information, or compilation of information, which is not patented, which is known only to the employer, the employer's licensees, the employer's employees, and certain other individuals, and which is used or developed for use in the employer's business, and which gives the employer possessing it the opportunity to obtain a competitive advantage over businesses who do not possess it, or the secrecy of which is certified by an appropriate official of the federal government as necessary for national defense purposes. The chemical name and Chemical Abstracts Service number of a substance shall be considered a trade secret only if the employer can establish that the identity or composition of the substance cannot be readily ascertained without undue expense by analytical techniques, laboratory procedures, or other lawful means available to a competitor.
- (n) "Label" shall mean any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
- (o) "Manufacturing facility" shall mean a facility classified in SIC Codes 20 through 39 that manufactures or uses a hazardous chemical or chemicals in North Carolina.
- (p) "Material Safety Data Sheets" or "MSDS" shall mean chemical information sheets adopted by the Occupational Safety and Health Division of the North Carolina Department of Labor in Title 13, Chapter 7 of the North Carolina Administrative Code (13NCAC 7).
- (q) "Non manufacturing facility" shall mean any facility in North Carolina other than a facility in SIC Code 20 through 39, the State of North Carolina (and its political subdivisions) and volunteer emergency service organizations whose members may be exposed to chemical hazards during emergency situations.
- (r) "OSHNC Standard" shall mean the current Hazard Communication Standard adopted by the Occupational Safety and Health Division of North Carolina Department of Labor in Title 13, Chapter 7 of the North Carolina Administrative Code (13 NCAC 7).
- (s) "Storage and Container" shall have the ordinary meaning however it does not include pipes used in the transfer of substances or the fuel tanks of self propelled internal combustion vehicles. (1985, c. 775, s. 1; 1987, c. 489, ss. 1, 2; 1998-217, ss. 28-30.)

PART 2. Public Safety and Emergency Response Right to Know.

§ 95-191. Hazardous Substance List.

- (a) All employers who manufacture, process, use, store, or produce hazardous chemicals, shall compile and maintain a Hazardous Substance List which shall contain the following information for each hazardous chemical stored in the facility in quantities of 55 gallons or 500 pounds, whichever is greater:

- (1) The chemical name or the common name used on the MSDS or container label;
- (2) The maximum amount of the chemical stored at the facility at any time during a year, using the following ranges:

Class A, which shall include quantities of less than 55 gallons or 500 pounds;

Class B, which shall include quantities of between 55 gallons to 550 gallons, and quantities of between 500 pounds and 5,000 pounds; and

Class C, which shall include quantities of between 550 gallons and 5500 gallons, and quantities between 5,000 pounds and 50,000 pounds; and

Class D, which shall include quantities of greater than 5500 gallons or 50,000 pounds; and

- (3) The area in the facility in which the hazardous chemical is normally stored and to what extent the chemical may be stored at altered temperature or pressure.
- (b) The Hazardous Substance List shall be updated quarterly if necessary, but not less often than annually; however, if a chemical is deleted from, or added to, the Hazardous Substance List, or if the quantity changes sufficiently to cause the chemical to be in a different class as defined in subsection (a) of this section, the employer shall update the Hazardous Substance List to reflect those changes as soon as practicable, but in any event within 30 days of such change.
- (c) In lieu of the information required by subdivisions (a)(1) through (a)(3), employers may substitute the information specified in section 312(d)(2) of the Superfund Amendments and Reauthorization Act of 1986, P.L. 99-499.
- (d) The Hazardous Substance List may be prepared for the facility as a whole, or for each area in a facility where hazardous chemicals are stored, at the option of the employer but shall include only chemicals used or stored in North Carolina. (1985, c. 775, s. 1; 1987, c. 489, s. 3.)

§95-192. Material safety data sheets.

- (a) Chemical manufacturers and distributors shall provide material safety data sheets (MSDS's) to manufacturing and non-manufacturing purchasers of hazardous chemicals in North Carolina for each hazardous chemical purchased.
- (b) Employers shall maintain the most current MSDS received from manufacturers or distributors for each hazardous chemical purchased. If the manufacturer or distributor for chemicals on the Hazardous Substance List has not provided an MSDS at the time the chemicals are received at the facility, the employer shall request one in writing from the manufacturer or distributor within 30 days after

receipt of the chemical. If the employer does not receive an MSDS within 30 days after his written request, he shall notify the Commissioner of Labor of the failure by manufacturer or distributor to provide the MSDS. (1985, c. 775, s. 1.)

§95-193. Labels.

Existing labels on incoming containers of hazardous chemicals shall not be removed or defaced. All containers of hazardous substances must be clearly designated as hazardous. (1985, c. 775, s. 1.)

§ 95-194. Emergency information.

- (a) An employer who normally stores at a facility any hazardous chemical in an amount of at least 55 gallons or 500 pounds, whichever is greater, shall provide the Fire Chief of the Fire Department having jurisdiction over the facility, in writing,
 - (i) the name(s) and telephone number(s) of knowledgeable representative(s) of the employer who can be contacted for further information or in case of an emergency and
 - (ii) a copy of the Hazardous Substance List.
- (b) Each employer shall provide a copy of the Hazardous Substance List to the Fire Chief. The employer shall notify the Fire Chief in writing of any updates that occur in the previously submitted Hazardous Substance List as provided in G.S. 95-191(b).
- (c) The Fire Chief or his representative, upon request, shall be permitted on-site inspections at reasonable times of the chemicals located at the facility on the Hazardous Substance List for the sole purpose of preplanning Fire Department activities in the case of an emergency and insuring by inspection the usefulness and accuracy of the Hazardous Substance List and labels.
- (d) Employers shall provide to the Fire Chief, upon written request of the Fire Chief, copy of the MSDS for any chemical on the Hazardous Substance List.
- (e) Upon written request of the Fire Chief, an employer shall prepare an emergency response plan for the facility which shall include, but not be limited to, facility evacuation procedures, a list of emergency equipment available at the facility, and copies of other emergency response plans, such as the contingency plan required under North Carolina Hazardous Waste Management Rules. A copy of the emergency response plan or any prefire plan or emergency response plan required under applicable North Carolina or federal statute or rule or regulation shall, upon written request by the Fire Chief, be given to the Fire Chief.

- (f) The Fire Chief shall make information from the Hazardous Substance List, the emergency response plan, and MSDS's available to members of the Fire Department having jurisdiction over the facility and to personnel responsible for preplanning emergency response, police, medical or fire activities, but shall not otherwise distribute or disclose (or allow the disclosure of) information not available to the public under G.S. 95-208. Such persons receiving such information shall not disclose the information received and shall use such information only for the purpose of preplanning emergency response, police, medical or fire activities.
- (g) Any knowing distribution or disclosure (or permitted disclosure) of any information referred to in subsection (f) of this section in any manner except as specifically permitted under that subsection (f) shall be punishable as a Class 1 misdemeanor. Restrictions concerning confidentiality or nondisclosure of information under this Article 18 shall be exemptions from the Public Records Act contained in Chapter 132 of the General Statutes, and such information shall not be disclosed notwithstanding the provisions of Chapter 132 of the General Statutes. (1985, c. 775, s. 1; 1987, c. 489, ss. 4-6; 1993, c. 539, s. 672; 1994, Ex. Sess., c. 24, s. 14(c).)

§ 95-195. Complaints, investigations, penalties.

- (a) Complaints of violations of this Part shall be filed in writing with the Commissioner of Labor. Such complaints received in writing from any Fire Chief relating to alleged violations of this Part shall be investigated by the Commissioner of Labor or his designated representative in a timely manner.
- (b) Duly designated representatives of the Commissioner of Labor, upon presentation of appropriate credentials to the employer, shall have the right of entry into any facility at reasonable times to inspect and investigate complaints within reasonable limits, and in a reasonable manner. Following the investigation, the Commissioner shall make appropriate findings. Either the employer or the person complaining of a violation may request an administrative hearing pursuant to Chapter 150B of the General Statutes. This request for an administrative hearing shall be submitted to the Commissioner of Labor within 14 days following the Commissioner making his findings. The Commissioner shall within 30 days of receiving the request hold an administrative hearing in accordance with Article 3 of Chapter 150B of the General Statutes.
- (c) If the Commissioner of Labor finds that the employer violated this Article, the Commissioner shall order the employer to comply within 14 days following receipt of written notification of the violation. Employers not complying within 14 days following receipt of written notification of a violation shall be subject to civil penalties of not more than one thousand dollars (\$1,000) per violation imposed by the Commissioner of Labor. There shall be a separate offense for each day the violation continues. The clear proceeds of civil penalties provided for in this section

shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2.

- (d) Any order by the Commissioner under subsection (b) or (c) of this section shall be subject to judicial review as provided under Article 4 of Chapter 150B of the General Statutes. (1985, c. 775, s. 1; 1987, c. 489, s. 7; 1998-215, s. 112.)

§95-196. Employee rights.

No employer shall discharge, or cause to be discharged, or otherwise discipline or in any manner discriminate against an employee at the facility because the employee has assisted the Commissioner of Labor or his representative or the Fire Chief or his representative who may make or is making an inspection under G.S. 95-194(c) or G.S. 95-195(b), or has testified or is about to testify in any proceeding under this Article, or has used the provisions of G.S. 95-208. (1985, c. 775, s. 1.)

§ 95-197. Withholding hazardous substance trade secret information.

- (a) An employer who believes that all or any part of the information required under G.S. 95-191, 95-192, 95-194(b) or 95-194(d) is a hazardous substance trade secret may withhold the information, provided that (i) hazard information on chemicals the identity of which is claimed as a hazardous substance trade secret is provided to the Fire Chief who shall hold it in confidence and (ii) the employer claims that the information is a hazardous substance trade secret.
- (b) Any person in North Carolina may request in writing that the Commissioner of Labor review in camera an employer's hazardous substance trade secret claim. If the Commissioner of Labor finds that the claim is other than completely valid; this finding shall be appealable under subsection (d) of this section. If the Commissioner of Labor finds that the claim is valid, he shall then determine whether the non-confidential information is sufficient for the Fire Chief to fulfill the responsibilities of his office. If the Commissioner of Labor finds that the information is not sufficient, he shall direct the employer to supplement the information with such other information as will provide the Fire Chief with sufficient information to fulfill the responsibilities of his office, but this finding shall be appealable under subsection (d) of this section.
- (c) The Commissioner of Labor and the Fire Chief shall protect from disclosure any or all information coming into either or both of their possession when such information is marked by the employer as confidential, and they shall return all information so marked to the employer at the conclusion of their determination by the Commissioner of Labor. Any person who has access to any hazardous substance trade secret solely pursuant to this section and who discloses it knowing

it to be a hazardous substance trade secret to any person not authorized to receive it shall be guilty of a Class I felony, and if knowingly or negligently disclosed to any person not authorized, shall be subject to civil action for damages and injunction by the owner of the hazardous substance trade secret, including, without limitation, actions under Article 24 of Chapter 66 of the General Statutes.

- (d) The employer, Fire Chief, or person making the original request who is an aggrieved party shall have 30 days after receipt of notification by the Commissioner of his findings under subsection (b) to request an administrative hearing on the determination. Any such hearing shall be held in a manner similar to that provided for in G.S. Chapter 150B, Article 3 and the decision upon the request of any aggrieved party shall be subject to the judicial review provided for by G.S. Chapter 150B, Article 4, provided that these administrative and judicial hearings shall be conducted in camera to assure the confidentiality of the information being reviewed. (1985, c. 775, s. 1; 1987, c. 827, s. 1; 1993, c. 539, s. 1290; 1994, Ex. Sess., c. 24, s. 14(c).)

§ 95-198. Medical emergency and non-emergency situations.

- (a) Where a treating health care provider determines that a medical emergency exists and the specific chemical identity of a hazardous chemical is necessary for emergency or first-aid treatment, the chemical manufacturer, importer, or employer shall immediately disclose the specific chemical identity of a hazardous substance trade secret substance to that treating physician or nurse, regardless of the existence of written statement of need or a confidentiality agreement. The chemical manufacturer, importer, or employer may require a written statement of need and a confidentiality agreement as soon as circumstances permit. The confidentiality agreement (i) may restrict the use of the information to the health purposes indicated in a written statement of need; (ii) may provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and (iii) may not include requirements for the posting of a penalty bond. The parties are not precluded from pursuing non-contractual remedies to the extent permitted by law.
- (b) In non-emergency situations, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under this section, to a responsible party, as defined in the standards adopted in Title 13, Subchapter 7F of the North Carolina Administrative Code (13 NCAC 7F), providing medical or other occupational health services to exposed persons if the request is in writing and states the medical need for the information. The employer may require that the responsible party sign a confidentiality agreement prior to release of the information. The parties are not precluded from pursuing non-contractual remedies to the extent permitted by law.

- (c) If the chemical manufacturer, importer or employer denies a written request for hazardous substance trade secret release, or does not provide this information within 30 days, the Department of Labor shall initiate the trade secret claim determination process under G.S. 95-197. (1985, c. 775, s. 1; 1998-217, s. 31.)

PART 3. Community Right to Know.

§ 95-208. Community information on hazardous chemicals.

- (a) Any person in North Carolina may request in writing from the employer a list of chemicals used or stored at the facility. The request shall include the name and address of the person making the request and a statement of the purpose for the request. If the person is requesting the list on behalf of or for the use of an organization, partnership, or corporation, he shall also disclose the name and business address of such organization, partnership, or corporation. The request may include, at the option of the employer, a statement to the effect that the information will be used only for the purpose stated. The employer shall furnish to the person making the request a list containing, at a minimum, all chemicals included on the Hazardous Substance List, the class of each chemical as defined in G.S. 95-191(a)(2), and an MSDS for each chemical for which an MSDS is available and is requested. Whenever an employer has withheld a chemical under the provisions of G.S. 95-197 from the information provided under G.S. 95-208, the employer must state that the information is being withheld and, upon request, must provide the MSDS for the chemical. Additional information may be furnished to the person making the request at the option of the employer. The employer shall provide, at a fee not to exceed the cost of reproducing the materials, the materials requested within 10 working days of the date the employer receives the written request for information.
- (b) If the employer fails or refuses to provide the information required under subsection (a) of this section, the person requesting the information may request in writing that the Commissioner of Labor review the request. The Commissioner of Labor may conduct an investigation in the same manner as provided in G.S. 95-195(b). Following the investigation, the Commissioner shall make appropriate findings. Either the employer or the person making the initial request may request an administrative hearing pursuant to Chapter 150B of the General Statutes. This request for an administrative hearing shall be submitted to the Commissioner of Labor within 30 days following the Commissioner making his findings. The Commissioner of Labor shall within 30 days of receiving the request hold an administrative hearing to consider the request for information under subsection (a) of this section. This hearing shall be held as provided for in G.S. Chapter 150B, Article 3. If the Commissioner of Labor finds that the request complies with the requirements of subsection (a) of this section, the Commissioner of Labor shall direct that the employer provide to the person making the request a list containing, at a minimum, all chemicals used or stored at the facility included on the Hazardous Substance List, the class of each chemical as defined in G.S. 95-

191(a)(2), and an MSDS for each chemical for which an MSDS is available and is requested and may in his discretion assess civil penalties as provided in G.S. 95-195(c); provided that it shall be a defense to such disclosure if the employer proves that the information has been requested directly or indirectly by, or in behalf of, a competitor of the employer, or that such information is a Hazardous Substance Trade Secret, or that the request did not comply with the requirements of subsection (a) of this section.

- (c) Any order by the Commissioner of Labor under subsection (b) of this section shall be subject to judicial review as provided under G.S. Chapter 150B, Article 4. (1985, c. 775, s. 1; 1987, c. 827, s. 1.)

PART 4. Implementation.

§ 95-216. Exemptions.

Notwithstanding any language to the contrary, the provisions of this Article shall not apply to chemicals in or on the following:

- (1) Hazardous substances while being transported in interstate commerce into or through this State;
- (2) Products intended for personal consumption by employees in the facilities;
- (3) Retail food sale establishments and all other retail trade establishments in Standard Industrial Classification Codes 53 through 59, exclusive of processing and repair areas, except that the employer must comply with the provisions of G.S. 95-194(a)(i);
- (4) Any food, food additive, color additive, drug or cosmetic as such terms are defined in the Federal Food, Drug and Cosmetic Act (21 U.S.C. 301 et seq.);
- (5) A laboratory under the direct supervision or guidance of a technically qualified individual provided that:
 - a. Labels on containers of incoming chemicals shall not be removed or defaced,
 - b. MSDS's received by the laboratory shall be maintained and made accessible to employees and students,
 - c. The laboratory is not used primarily to produce hazardous chemicals in bulk for commercial purposes, and
 - d. The laboratory operator complies with the provisions of G.S. 95-194(a) (i)
- (6) Any farming operation which employs 10 or fewer full-time employees, except that if any hazardous chemical in an amount in excess of 55 gallons or 500 pounds, whichever is greater, is normally stored at the farming operation, the employer must comply with the provisions of G.S. 95-194(a) (i); and
- (7) Any distilled spirits, tobacco, and untreated wood products; and
- (8) Medicines used directly in patient care in health care facilities and health care facility laboratories. (1985, c. 775, s. 1; 1987, c. 489, s. 8.)

§ 95-217. Preemption of local regulations.

It is the intent of the General Assembly to prescribe this uniform system for the disclosure of information regarding the use or storage of hazardous chemicals. To that end, all units of local government in the State are preempted from exercising their powers to require disclosure, directly or indirectly, of information regarding the use or storage of hazardous chemicals by employers to any members of the public, or to any branch or agent of State or local government in any manner other than as provided for in this Article. This section does not preempt the enforcement of the provisions of any nationally recognized fire code that may be adopted by a unit of local government. (1985, c. 775, s. 1; 1987, c. 489, s. 9.)

§95-218. Severability.

The provisions of this Article are severable, and if any phrase, clause, sentence, or provision of this Article, or the application of any such phrase, clause, sentence or provision to any person, business entity or circumstances, other than those to which it was held invalid shall not be affected thereby. (1985, c. 775, s. 1.)