May 14, 2021

To All Persons Concerned

Name of Company Listed:	Kyocera Corporation
Name of Representative:	Hideo Tanimoto, President and Director
	(Code number: 6971, The First Section of the Tokyo Stock Exchange)
Person for Inquiry:	Hiroaki Chida General Manager of Corporate Management Control Group (Tel: +81-75-604-3500)

Notice Relating to Results of Investigation into Inappropriate Acquisition of Certification from Third-Party Organization for Certain Chemical Products

As Kyocera Corporation ("Kyocera" or "the Company") disclosed on January 8, 2021, certain Kyocera chemical products were improperly identified as having received certification from Underwriters Laboratories ("UL"), a third-party safety science organization in the United States.

Kyocera conducted an investigation under the supervision of a special investigation committee (hereinafter "the committee"), which included a law firm, to identify the facts and cause of this issue. Kyocera received an investigation report from the committee and, in response to its contents, developed corrective and preventive measures for the future; the report results, corrective, and preventative measures are hereby disclosed in the attached.

We extend deep apologies to all who are concerned for the inconveniences it may bring, and we will make every effort to prevent a similar recurrence.

At this point in time, any impact on the Company's financials cannot be foreseen. However, any impact will be disclosed if there is an expectation that it will have a material effect on the financial performance of the Company.

[Appendices]

- Investigation Report (Published Edition)
- Corrective Action and Measures to Prevent Recurrence against Inappropriate Conduct regarding Kyocera's Chemical Products

Investigation Report

(Published Edition)

May 13, 2021 (Reiwa 3)

Special Investigation Committee for UL Issue

This English version of the Investigation Report is translated by Kyocera Corporation (hereinafter "Kyocera") from Japanese version which Kyocera received on May 13, 2021 (JST). Please note that the original language of the Investigation Report is Japanese and in case of any discrepancies between the Japanese and English, the Japanese version shall prevail.

To Kyocera Corporation

The Special Investigation Committee for UL Issue submits its findings as follows.

May 13, 2021 (Reiwa 3)

Kyocera Corporation Special Investigation Committee for UL Issue

Chairman Katsumi Nakamura

Committee Member Manabu Adachi

Committee Member Hiroshi Osada

Table of Contents

Chapter 1 Outline of the investigation

I Background of the establishment of the Special Investigation Committee

In the autumn of 2020, a young employee from the Chemical Materials Division of the Corporate Ceramic Materials Semiconductor Components Group (hereinafter called the "Chemical Materials Division") of Kyocera Corporation (hereinafter called "Kyocera" or "the Company") reported that the Chemical Materials Division submits test pieces (samples) different from those specified by the Underwriters Laboratories (hereinafter called the "UL"), which is a third-party safety science organization in the United States, for its follow-up inspections (follow-up service, hereinafter called "FUS") for some of the chemical materials products manufactured and marketed by the Chemical Materials Division.

Taking this opportunity, Kyocera immediately conducted an internal investigation to ascertain the facts, and found that wrong samples of five product groups produced at each plant of the Chemical Materials Division were submitted to the UL over a long period of time (hereinafter called "the Case").

Recognizing the seriousness of the situation, Kyocera established the Special Investigation Committee composed of external specialists, etc. (hereinafter called "the Committee") on January 15, 2021, with the aim of investigating the facts and the cause from an objective standpoint, and making proposals on measures to prevent the recurrence of similar incidents.

II Purpose and scope of the investigation

The purpose and scope of the investigation by the Committee are as follows.

a. Clarification of the facts of the Case
b. Investigation of the cause of the Case and recommendations for measures to prevent its recurrence
c. Other matters deemed necessary by the Committee in the course of the investigation

III Composition and investigation system of the Committee

1. Committee Member

The composition of the Committee is as follows.

Chairman Katsumi Nakamura Attorney at Law/Certified Fraud Examiner (T. Kunihiro & Co., Attorneys-at-Law)

Committee Member Manabu Adachi Attorney at Law (Tokyo Fuji Law Offices)

Committee Member Hiroshi Osada Professor Emeritus, Tokyo Institute of Technology

2. Investigation assistants

The Committee appointed the following three Attorneys at Law as investigation attorneys.

Attorney at Law	Masatake Hirose (Tokyo Fuji Law Offices)
Attorney at Law	Yuka Masunari (T. Kunihiro & Co., Attorneys-at-Law)
Attorney at Law	Koji Ikeda (T. Kunihiro & Co., Attorneys-at-Law)

These committee members and investigation assistants are all independent experts with no interest in the Company.

In addition, the following members of KPMG FAS Co., Ltd. were in charge of the digital forensic investigation (hereinafter called "Forensic Investigation").

Tomoyuki Hotta, Kazuma Yoshioka, Shingo Yamashita, Koki Yamada, Tsukasa Kumamoto, Maya Hirohara and nine others

3. Secretariat

In conducting the survey, a committee secretariat was established with the Company's compliance division employees as members (17 persons in total, including two in-house counsels). The Secretariat provided general support for the investigation by the Committee, including scheduling of the interviews, etc. and preparation of the interview record, etc.

IV Measures to ensure the independence of the Committee and the effectiveness of the investigation

Since this is an issue of inappropriate quality conduct that may affect not only the UL but also customers, the market, etc., the Committee shared information on the investigation as necessary to enable Kyocera to fulfill its accountability to customers, etc. in a timely manner. Thus, although the Committee does not rely on the "Guideline of Third-Party Inspection Committee for Corporate Misconduct" formulated by the Japan Federation of Bar Associations in every aspect, the Committee agreed with Kyocera on the following for the purpose of ensuring the objectivity and independence of the investigation:

- Kyocera shall cooperate fully with the investigation conducted by the Committee and shall have its officers, employees, etc. cooperate with the investigation.
- Kyocera shall ensure access to the documents, information, employees, etc. necessary by the Committee for the investigation.
- If Kyocera does not cooperate fully with the investigation by the Committee, or if any sabotage of the investigation is committed, the Committee may describe the situation in the Investigation Report.
- The right to draft an Investigation Report shall be vested exclusively in the Committee

(including no obligation to disclose all or part of the Investigation Report to Kyocera prior to submission).

V Investigation method, etc.

1. Investigation period

The Committee conducted the investigation from January 15 to May 13 of 2021.

2. Committee meetings

During the period mentioned in 1. above, the Committee met a total of 13 times.

3. Specific survey method

The details of the investigation conducted by the Committee are as follows.

(1) Interviews with related parties, on-site investigations, etc.

A total of 81 employees (including retirees) from the Chemical Materials Division and its related divisions were interviewed in person or via Web conferencing for approximately 127 hours.

In addition, Kyocera conducted a total of six on-site investigations at its Kawasaki Plant, Fukushima Koriyama Plant (hereinafter called "Koriyama Plant") and Tochigi Moka Office (hereinafter called "Moka Office").

(2) Verification of related documents, etc.

The Committee analyzed and verified various related documents obtained from the Chemical Materials Division and the interviewees, such as internal documents, meeting minutes, product formulation tables, delivery specifications with customers, etc. related to the UL standards and FUS.

Based on the related documents, meetings were held with the Chemical Materials Division as necessary to confirm facts, exchange opinions, and for other purposes.

(3) Forensic Investigation

The Committee selected KPMG FAS Co., Ltd. as a specialist provider of forensics, and preserved documents stored on company-lent personal computers (PCs) used by eight investigation subjects determined necessary by the Committee as well as their E-mails stored on the E-mail server. For the preserved electronic data, deleted files were restored, and then the documents and the E-mails were extracted. However, the PCs used by the four former-employees had already been disposed of because it had been a long time since they

retired.

In addition, regarding the electronic data stored on the file sharing server at each business site, the Committee conducted maintenance for the 24 servers that it determined necessary.

We used Intella Connect (Ver. 2.3.1), a review software from Vound Software, to build a database for searching such maintained and extracted electronic data. The E-mails were narrowed down by 196 keywords or keyword conditions defined by the Committee, and 34,598 E-mails were analyzed. As for the document data, 34,323 files were analyzed from the main folders related to the UL operations used by the technical and QA departments. In addition, the Committee further analyzed the contents of the 116 E-mails and the 115 document files that seemed to be highly relevant to the Case and similar cases.

(4) Questionnaire survey (See Chapter 2 VII. for details.)

a. Questionnaire for employees involved in chemical materials business

A questionnaire survey was conducted with a total of 545 employees related to the chemical materials business (those that are engaged in the chemical materials business and those who have been engaged in chemical materials business in the past), regarding the Case, the existence of similar cases, etc. (100% response rate).

b. Questionnaire for employees in charge of UL in other divisions

The Case took place in the Chemical Materials Division. Thus, for the purpose of investigating any occurrence of similar cases in other divisions handling the UL certification, a questionnaire survey was conducted with a total of 74 employees of other divisions of the Company's group that are currently engaged or have been engaged in the past in the UL certification/registration or the FUS (100% response rate).

c. Actions in response to the questionnaire responses

After verifying the results of the questionnaire responses, the Committee collected further information through face-to-face interviews, phone interviews, E-mail interviews, etc. with the respondents as determined necessary by the Committee.

(5) Establishment of a hotline

We established an anonymous hotline (T. Kunihiro & Co., Attorneys-at-Law) for the employees involved in the chemical materials business and the employees in charge of the UL matters in other divisions (target members are the same as the questionnaire respondents) and spread the word about it. Through the investigation period, we received information from three people and conducted interviews and other investigations with

those whom we determined necessary.

VI Non-UL issues

Through the questionnaire surveys, Forensic Investigation, information provided to the hotline, interviews with the relevant parties, and field investigations, the Committee identified issues related to quality and inspection that Kyocera should continue to investigate and respond to in addition to the UL issue. With respect to these matters, taking into consideration the confidentiality of the information providers and the information provided, the Committee organized the facts that it has learned, prepared the Committee's assessment results and opinions on the measures that Kyocera should take (including opinions on ensuring an investigation and handling system that takes into account objectivity, independence, and neutrality, including the participation of outside experts), and made a report to Kyocera on May 10, 2021.

VII Limitations of the Investigation

It should be noted that the following constraints and limitations were encountered through the Investigation.

- The Investigation relies on documents disclosed by or statements made by the parties concerned. In principle, the Committee assumes that these documents, statements, etc. are true and accurate, although it has made prudent judgments in cases where clear inconsistencies, etc. were found[1].

  The relevant certification of the Investigation is subject to change if there are any errors in the documents, etc. disclosed to the Committee by the parties concerned, the facts underlying them, and the statements made by the parties concerned, or if there are any facts that were not disclosed by the Company prior to the preparation of this Investigation Report.
- The UL standards are the main focus of the Case. The UL is a private entity, and any non-public information relating to their certifications is a trade secret of the UL. Therefore, in consideration thereof, some parts of this Investigation Report are intentionally abstracted, simplified, or omitted, although they should be described specifically in theory.
- Since the Case was committed in the past over many years, the cooperation of retirees was indispensable in order to understand the past circumstances, etc. Although many

[1] Some parties concerned were reluctant to cooperate in the investigation, denying involvement until objective evidence such as E-mails, documents, etc. were presented.

of the retirees were cooperative, some of them refused the Committee's request for an interview.

- This Investigation Report is intended to be used only for confirmation of facts, investigation of the cause of the issue, and formulation and evaluation of recurrence prevention measures. The Committee does not intend the Investigation Report and the results of the Investigation to be used for any purpose other than those stated above, and the Investigation Report is not intended for use in pursuing legal liability of the parties concerned or to punish them internally.
- As part of the investigation was carried out in the midst of the proclamation of a state of emergency due to the outbreak of COVID-19, while important interviews were conducted in face-to-face format, the majority had to be conducted via Web conferencing. In addition, there were some constraints, such as the abandonment of site visits to the overseas plants.

Chapter 2 Findings

I History and current status of chemical materials business

1. History

Kyocera's chemical materials business has roots in the business of Toshiba Chemical Corporation (hereinafter called "Toshiba Chemical") established by the Toshiba Group.

Toshiba Chemical was established in 1974 when the chemical materials division of Toshiba Corporation (hereinafter called "Toshiba," although it was then Tokyo Shibaura Electric Co., Ltd.) was spun off as a separate company to take over Toshiba's businesses in the manufacture and sale of synthetic resins and insulating materials. Early production bases were the Kawaguchi Plant (Kawaguchi City, Saitama Prefecture: closed and sold in 2015) and the Kawasaki Plant.

In 1982, Toshiba Chemical made Toshiba Reinforced Plastic Industry Co., Ltd. (hereinafter called "Toshiba Reinforced Plastic"), which was a company that also existed when Toshiba Chemical was established, a subsidiary in the Toshiba Group. In 1991, the Koriyama Plant was established. In 1996, manufacturing bases were established in Singapore and China, as well as both outside and inside Japan. The foundation for the current production system of the business was established.

In August 2002, Toshiba Chemical became a 100% subsidiary of Kyocera through a stock exchange and was renamed as Kyocera Chemical Corporation (hereinafter called "Kyocera Chemical"). In 2004, it merged with its subsidiary, Kyocera Chemical Reinforced Plastics Co., Ltd. (formerly Toshiba Reinforced Plastic, renamed at the time of merger), closed its Kawaguchi Plant and sold it, and in April 2016, it merged with Kyocera. It was reorganized

into the Chemical Materials Division, Corporate Ceramic Materials Semiconductor Components Group of Kyocera.

The sales of this business in Kyocera in FY 2020 was approx. 23 billion yen, accounting for about 1.5% of the total sales of the Kyocera Group. As of April 1, 2021, the number of employees involved in the production activities of this business in Japan was 355. The combined number of employees at overseas production bases in Singapore and China was 482, accounting for slightly less than 1% of the total workforce of the Kyocera Group. The products are sold through the sales route inside Japan of the Corporate Ceramic Materials Semiconductor Components Group of Kyocera, to which the Chemical Materials Division belongs, and through the sales route of Kyocera Group's sales subsidiaries outside Japan.

2. Products related to the inappropriate conduct

The products related to the inappropriate conduct handled by the Chemical Materials Division are as follows:

(1) Epoxy encapsulants for semiconductors (42% of the sales of the chemical materials business in FY 2020)

Epoxy encapsulant for semiconductors (hereinafter called "encapsulant") is filled into a semiconductor package, wraps the semiconductor element directly in the package, and protects the element from stresses such as temperature, humidity, gas, dust, and mechanical and thermal stresses such as vibration and impact.

Kyocera mainly produces encapsulants for semiconductors used in smartphones, personal computers, consumer electronics, etc.

(2) Casting resins (13% of the sales by the Chemical Materials Division in FY 2020)

Casting resin (hereinafter called "resin") is a liquid epoxy resin material applied on electrical components that require high weatherability and high voltage reliability, as well as on components that require high insulation in heavy electric machines.

Kyocera also develops resins for automotive ignition coils.

(3) Phenolic resin molding materials (1% of the sales by the Chemical Materials Division in FY 2020)

Phenolic resin molding materials (hereinafter called "phenolic molding materials") are thermosetting molding materials with an extremely wide range of demand, from kitchen appliances to electronic/electric components and automotive components.

Kyocera produces products for application in electrical insulation components and highly

heat-resistant components.

(4) Unsaturated polyester resin molding materials (2% of the sales by the Chemical Materials Division in FY 2020)

Unsaturated polyester resin molding material (hereinafter called "premix molding material") is a molding material obtained by blending a catalyst, a filler, a pigment and a glass filler with a special unsaturated polyester resin. It is superior to other molding materials in impact resistance, heat resistance, and electrical characteristics. They are applied to industrial electrical components, motor insulation, electrical appliances, household power supplies, and insulation structural components such as housings.

(5) Insulating varnishes (6% of the sales by the Chemical Materials Division in FY 2020)

Insulating varnishes can be generally divided into two types. One is varnishes for electric wires which are coated on the electric wires and then dried and baked at a high temperature to form a coating. Another is impregnation varnishes used for impregnating motor coils for home appliances, power tools, etc.

Kyocera's insulating varnishes have excellent electrical insulation and heat resistance properties, and are applied to electric components such as drive motors and transformers for electric home appliances, automobiles, and electric trains.

(6) Resin boards for electric products (1% of the sales by the Chemical Materials Division in FY 2020)

Resin boards for electric products are insulation plates sold by Kyocera. Unsaturated polyester resin and epoxy-modified resin material are heated and pressure-molded.

They have excellent electrical insulation, heat resistance, acid resistance and chemical resistance properties, and are mainly applied to heavy electric machine components, various switchboards, etc.

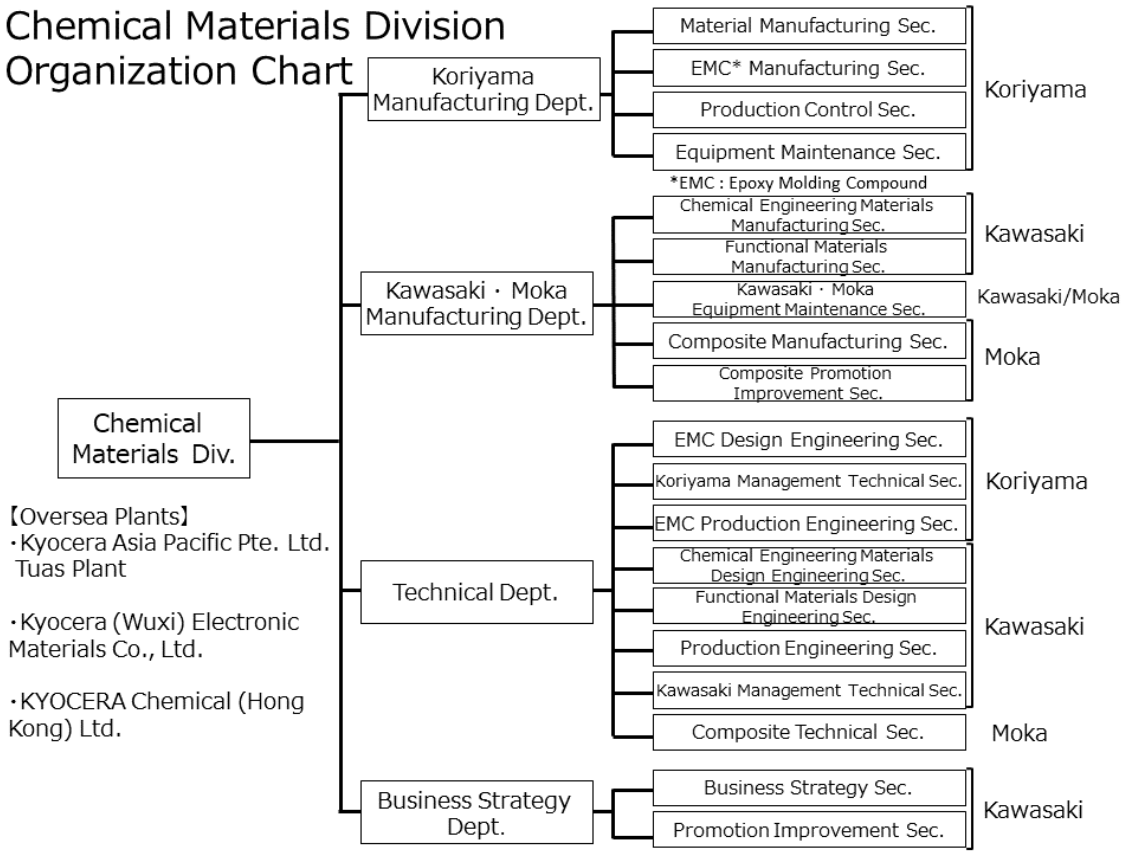
3. Production bases

The production bases of the business are as follows (the number of employees is as of April 1, 2021).

	Base name	History	Items produced	Number of employees
[1]	Kawasaki Plant (Kawasaki City, Kanagawa)	The Plant has been in operation as a Toshiba's manufacturing base since 1962. After being a manufacturing base of the Chemical Division of Toshiba Kagaku Kogyo Co., Ltd. (1966), Toshiba Chemical (1974), and Kyocera Chemical (2002), it has remained as a manufacturing base of Kyocera Corporation (dedicated plant for the chemical materials business since 2016) to this date.	・ Insulating varnish ・ Resin	168 employees
[2]	Moka Office (Moka City, Tochigi)	Established as a manufacturing company of Toshiba Group, Toshiba Reinforced Plastic, it has been in operation since 1968 as the headquarters and manufacturing plant. After being a subsidiary of Toshiba Chemical (1982), a subsidiary of Kyocera Chemical (2002), and merged into Kyocera Chemical (2004), it has remained as a manufacturing base of Kyocera Corporation (dedicated plant for the chemical materials business since 2016) to this date.	・ Premix molding materials ・ Phenolic molding materials ・ Resin boards for electric products	27 employees
[3]	Koriyama Plant (Koriyama City, Fukushima)	The Plant has been in operation since 1991 as a manufacturing base of Toshiba Chemical. After being a manufacturing base of Kyocera Chemical (2002), it has remained as a manufacturing base of Kyocera Corporation (dedicated plant for the chemical materials business since 2016) to this date.	・ Encapsulant	160 employees

[4]	Kyocera Asia Pacific Pte. Ltd. Tuas Plant (hereinafter called the "Singapore Plant")	The Plant has been in operation as the headquarters and manufacturing plant of Toshiba Chemical Singapore Pte., Ltd. since 1996. After operating as Kyocera Chemical Singapore Pte., Ltd. (2002), it merged with Kyocera Asia Pacific Pte., Ltd., the regional headquarters of the Kyocera Group in Southeast Asia and Oceania. It has been in operation exclusively for its chemical materials business to this date.	・ Encapsulant	64 employees
[5]	KYOCERA (Wuxi) Electronic Materials Co., Ltd. (hereinafter called the "China Plant")	The company has been in operation since 1996 as the headquarters and manufacturing plant of Wuxi Tong Chemical Co., Ltd. In 2002, the company became KYOCERA (Wuxi) Co., Ltd., and in April 2020, it was renamed Kyocera (Wuxi) Electronic Materials Co., Ltd.	・ Resin ・ Premix molding materials ・ Insulating varnish (production ended in December 2019)	63 employees
[6]	Former Kawaguchi Plant (Kawaguchi City, Saitama)	The Plant had been in operation as a manufacturing base of Toshiba since 1935. After operating as a manufacturing base of the Chemical Division of Toshiba Kagaku Kogyo Co., Ltd. (1966) and Toshiba Chemical (1974) and as the head office/manufacturing base of Kyocera Chemical (2002), it was closed and sold in 2015.	・ Encapsulants (transferred to Koriyama Plant) ・ Phenolic molding materials (transferred to Moka Office)	-

4. Organization



* The quality assurance department and the quality control department do not belong to the Chemical Materials Division. Both of these departments are part of the Ceramic Materials Semiconductor Components QA Division.

* Back office operations, such as general affairs and human resources, are managed by employees belonging to indirect departments such as the Corporate General Affairs & HR Group.

II The UL standards

1. Overview of the UL standards

The UL standards are functional and safety standards developed by the Underwriters Laboratories (currently a profit-making company named “UL LLC”), a third-party safety certification organization in the United States. They are designed for conducting tests based on standards developed by the UL, as well as other standards, and certifying products that meet the requirements set by the standards. After granting the certification, UL conduct periodic plant audits, as described below, to confirm that products equivalent to those used at the time of certification are being manufactured on an ongoing basis.

The UL establishes functional and safety standards and specifications not only for final products but also for a wide range of products, including materials and components used in products and manufacturing processes such as devices and equipment (hereinafter in this section called “products, etc.”). Although the UL is a private institution, many manufacturers in Japan obtain the UL certifications to ensure the functionality and safety of their products for customers.

In the UL certification process, a suffix (branch number) can be set for an item[2] to be registered, and the item may be registered with a notation such as (++) at the end of the registered grade in advance. For example, if the name is AB-C500, the item may be registered by the notation of “AB-C500,” but it is also possible to register the item name in the form of “AB-C500 (++),” and by doing so, names can be used by adding characters after AB-C500. (E.g., item names are set such as AB-C500XSP for Company X, AB-C500Ysp for Company Y, etc. However, the formulation is assumed to be the same.) This is used when a product having the same formulation as the formulation at the time of certification is sold to multiple customers by changing only the item name, and in such a case, the certification holder must manage the item using suffixes.

2. The UL certifications obtained by the Chemical Materials Division

The Chemical Materials Division obtains the following three types of the UL certifications related to the inappropriate conduct.

(1) UL94

UL94 is one of the UL standards for evaluating the grade of flame retardancy of plastic materials, and 5VA, 5VB, V-0, V-1, V-2 and HB[3] are given as grades for flame retardancy.

The Chemical Materials Division had obtained the UL94 certification for encapsulants,

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[2] In this Investigation Report, the registered name by the UL certification is referred to as a “registered grade”, which is published on the UL Product iQ™ website, and the "item" is defined as the product that is actually manufactured and delivered by the Chemical Materials Division. For example, if an encapsulant is manufactured and shipped under the product name AB-C500XSP, the actual name of the product, AB-C500XSP, refers to the "item", and if the product is UL certified, the name registered with UL, AB-C500 (++), refers to the "registered grade."

[3] 5V (5VA, 5VB) is considered to be the most flame retardant grade in UL94. Among V-0, V-1, V-2, and HB, V-0 is required to have the highest flame retardancy, followed by V-1, V-2, and HB in that order.

resins, phenolic molding materials, and premix molding materials for a total of 146 registered grades at the time of the discovery of the Case.

(2) UL1446

The standard designed to evaluate the insulation performance of the aggregate of the individual materials which constitute the electric equipment (called an "electrical insulation system") is UL1446. In addition, UL1446 covers individual components of an electrical insulation system, and the Chemical Materials Division has obtained the UL1446 certification for its insulating varnish (total of 17 registered grades at the time of the discovery of the Case).

(3) UL746

The UL has established UL746A to UL746D as standards for the performance evaluation of resin materials in terms of ignition resistance, heat resistance, electrical resistance, etc. Mainly, there are UL746A, which certifies electrical and mechanical properties, and UL746B, which evaluates long-term heat resistance. The Chemical Materials Division has obtained the UL94 certification for some of its items together with UL746 certification (a total of 39 registered grades at the time of the discovery of the Case).

3. FUS

In order to confirm that the performance achieved when the certification was granted is maintained for the product that has obtained the UL certification, UL inspectors conduct unannounced on-the-spot inspections known as the FUS at the manufacturing plant on a regular basis (four times a year). The FUS consists of [1] spot inspections to confirm that the processes and products are properly labeled, and [2] testing/inspection by specifying samples from inventory products.

If a test/inspection result is "nonconforming" (fail), the certification holder must choose between consulting with the UL engineers on the cause of the failure, or receiving a second sample designation and submitting test pieces again. If the second test pieces pass, nonconformity is withdrawn, but if the second test pieces also fail, the relevant product will be prohibited, in principle, from being shipped with a mark indicating that they are UL certified (UL mark), and if the problem cannot be resolved, the certification may be revoked.

During the test/inspection, inspectors visit the manufacturing site of the UL certified product, designate a specific product from the inventory, and the certification holder has to prepare test pieces using the designated product and send them to the UL. The UL will perform ID (identification) test of product formulation — infrared spectroscopy (IR),

thermogravimetric analysis (TGA), and, for some products, differential scanning calorimetry (DSC) — on the test pieces sent to UL to ensure that the formulation is unchanged from the time of the certification.

In the case of UL94, in addition to the ID test, a combustion test must be performed in the FUS to meet the flame retardancy criteria. On the other hand, in the case of UL1446, only the identification process by the ID test is performed, and the insulation is not judged. UL746 is only tested at the time of the certification and is not subject to the FUS.

In the Chemical Materials Division, the Management Technical Section, which belongs to the Technical Division of the Kawasaki Plant, serves as the general contact point for receiving the FUS. All of the products related to the inappropriate conduct are raw materials, and before the flammability test, they need to undergo a forming process. Therefore, when UL inspectors visit the plant, they just designate a lot of the mass-produced product in the plant in the FUS and do not take the relevant mass-produced product with them when they leave the plant. Thus, test pieces are prepared from the designated product at the relevant manufacturing site, and the test pieces are first sent to the Management Technical Section of the Kawasaki Plant. The employee in charge of this section (a different person from the contact person) must carry out in-house preliminary tests using the sent test pieces, and after confirming that the analytical results are the same as those of the UL certified product, the test pieces are sent from the relevant manufacturing site to the UL.

III Definitions and types of inappropriate conduct

1. Definitions

According to the UL standard, the test pieces submitted at the time of the application are registered at the UL as the ID of the relevant registered grade based on the results of the IR, TGA, and DSC analyses described in II (called reference data). With regard to the UL certification, a principle of "one formulation per registration" exists, and changing the formulation of the test pieces submitted to UL at the time of the certification after the certification is granted is not permitted in principle, and the formulation at the time of the certification must match that of the mass-produced product. In order to verify this, the formulation of the test pieces submitted in the FUS must be identical to that of the mass-produced product. As mentioned in II, the UL is to perform the ID analysis on the test pieces submitted in the FUS to confirm that the submitted test pieces are equivalent to the test pieces submitted at the time of the certification, in other words, they are to confirm whether both are manufactured with the same formulation at the time of the certification.

Thus, the UL standard requires that [A] the formulation at the time of the certification be identical to [B] the formulation of the actual mass-produced product ([A] = [B]), and to

verify this, [C] the formulation of the test pieces submitted in the FUS must also match [A] and [B] ([A] = [B] = [C]). Therefore, the Committee defined inappropriate conduct as the situation when each of [A] to [C] do not match.

2. Major types of inappropriate conduct

The major types of inappropriate conduct in the Case can be broadly divided into (1) inappropriate conduct relating to the certification registration, and (2) inappropriate conduct relating to the FUS. More specifically, such inappropriate conduct can be categorized as follows (inappropriate conduct in an individual product group that do not fall into any of the following categories, if any, will be described in IV).

(1) Inappropriate conduct about certification registration

- A mass-produced product with a formulation different from that of the UL certification is manufactured and shipped without changing the registered grade. [[A] ≠ [B]]

According to the aforementioned "one formulation per registration" principle, manufacturing and shipping a product of a formulation different from that at the time of the UL certification is not permitted in principle. Therefore, it is necessary to obtain a new certification (registered grade) or to register an additional ID. However, the Chemical Materials Division did not take such actions, but manufactured and shipped the mass-produced product whose formulation was different from that at the time of the certification as a certified product. This inappropriate conduct was mainly related to the product groups which acquired UL94.

This type of inappropriate conduct can be divided into [a] cases in which mass-produced products with a formulation different from the formulation at the time of the UL certification were manufactured and shipped from the beginning, and [b] cases in which mass-produced products with the same formulation as that at the time of the UL certification were initially manufactured and shipped, but manufacturing and shipping continued without a new UL application despite subsequent changes in the formulation due to changes in raw materials, customization as requested by a customer.

- Although the formulation was changed due to changes in the raw materials, customization in response to customer requests, or for other reasons, the product was manufactured and shipped by adding a suffix (branch number) without changing the registered grade. [[A] ≠ [B]]

Addition of a suffix is allowed only for the purpose of item management. As long as the

"one formulation per registration" principle is a requirement, all items with suffixes must have the same formulation, and items with altered formulation from the time of the certification are not allowed to be manufactured or shipped only by adding a suffix (as if it is a derivative product). However, the Chemical Materials Division continued to add a suffix to items whose formulation was changed, and manufactured and shipped them as the original product. This inappropriate conduct was mainly related to some product groups which acquired UL94.

(2) Inappropriate conduct in FUS

・ Test pieces with a different formulation from the specified mass-produced product were submitted to the UL (replacement of a test piece). [[C] ≠ [B]]

As mentioned above, as long as the "one formulation per grade" principle is a requirement, the formulation of the test pieces prepared and submitted in the FUS conducted to assure conformity to the principle must be the same as that of the mass-produced product. However, the Chemical Materials Division submitted test pieces with a different formulation from that of the mass-produced product to the UL in the FUS. This inappropriate conduct was mainly related to the product groups which acquired UL94 or UL1446.

For some product groups, a manual for the FUS handling was prepared, which made it a custom to prepare test pieces for the FUS according to the formulation table described in the manual, and the test pieces (substitute test pieces) were called "special samples" and submission of special samples was called "special handling."

・ When there were products that might not have passed the flammability test, they were moved away from the eyes of the UL inspectors.

In the FUS, the UL inspectors visit the manufacturing site without prior notice, and a mass-produced product at that time is designated for the FUS. Therefore, if not designated by the UL inspectors, the flame retardancy issue will not be found. Thus, for some product groups, the employee in charge hid the products with unsatisfactory flame retardancy properties so that they would not be designated by the UL inspectors.

3. Gray area judgment

The inappropriate conduct are broadly divided into the above types, and there are cases where [A] the formulation at the time of the certification does not match [B] the formulation of the actual mass-produced product (above 1.), and [C] the formulation of the test pieces submitted in the FUS does not match [B] the formulation of the actual mass-produced

product (above 2.).

On the other hand, in the case where [C] the formulation of the test pieces submitted in the FUS matches [B] the formulation of the actual mass-produced product (in other words, cases in which replacement test pieces were not sent), since the test pieces passed in the FUS without conducting any inappropriate conduct, there is a high possibility that [A] the formulation at the time of the certification matches [B] the formulation of the actual mass-produced product. However, even in such a case, the possibility cannot be denied that the formulation at the time of the certification has been changed without affecting the results of the ID tests such as IR, TGA, etc. Therefore, the Committee did not determine "compliance" in cases where evidence of [A] the formulation at the time of the certification is not available to prove [A] = [B], and labeled them as gray (judgment).

IV Details of inappropriate conduct

This section covers the specific procedures of the inappropriate conduct, the number of the inappropriate conduct, the timing of the start of the inappropriate conduct, the history of the inappropriate conduct, etc.

From the viewpoint of the impact on customers, etc., it was determined that products currently manufactured and marketed, as well as products that were manufactured and marketed until recently, should be considered as the affected products, and therefore, products that have been manufactured and marketed in the two-year period from December 1, 2018 to November 30, 2020 (hereinafter called "the relevant period") were subjected to the investigation. However, this also refers to products whose marketing was terminated before the relevant period, if any inappropriate conduct were found in the course of the investigation.

1. Encapsulants

(1) Method and number of inappropriate conduct

a. Method of inappropriate conduct

The following inappropriate conduct were performed related to encapsulants.

[1] Inappropriate conduct about certification registration

- At the time of the certification, special test pieces with a different formulation from that of the product to be mass-produced and with improved flame retardancy were prepared and submitted, and a new registration was made (acquisition of certification by switching test pieces).
- Cases where the product was manufactured and shipped without changing the registered grade and adding a suffix (branch number), despite a change in the

formulation due to changes in the raw materials, customization in accordance with customer requests, or for other reasons.

[2] Inappropriate conduct in FUS

- Cases where test pieces with a different formulation from the specified mass-produced product were submitted to the UL (replacement of a test piece).
- When one product with a suffix was specified, the test piece from the same product group that was likely to pass (typical model) was submitted to UL in place of the product (replacement of a test piece).

b. Number of inappropriate conduct

During the relevant period, the Company manufactured and sold 397 items of encapsulants that were certified by the UL related to flame retardancy (UL94).

Among these, the Committee has identified the inappropriate conduct specified in the above [1] or [2] for 379 items.

As for the remaining 16 items, it was not found that that the inappropriate conduct in [2] above was taken in the FUS, and it was difficult to determine that the formulation was clearly different from the available formulation table, etc., so it was not determined that inappropriate conduct was taken. However, due to the lack of records, etc., [A] the formulation at the time of the certification was not known, and there was no way to prove that [A] the formulation at the time of the certification matches [B] the formulation of the mass-produced product, a gray area judgment was given.

In addition, it was determined that inappropriate conduct were not taken for the two items for which it was not found that the inappropriate conduct in [2] above was taken in the FUS, and where matching between [A] the formulation at the time of the certification, and [B] the formulation of the mass-produced product was determined based on things such as the formulation table at the time of the certification, statements made by the employee in charge, etc.

Encapsulants are also manufactured at the Singapore Plant in addition to the Koriyama Plant, and the Singapore Plant was subject to the FUS. However, regarding the picked up item, unmolded product (powdery) were sent from Singapore Plant to Koriyama Plant, then, test pieces were prepared at the Koriyama Plant to suit the designated product, sent back to the Singapore Plant, and then submitted to the UL. As a result, the abovementioned inappropriate conduct were taken for the FUS at the Singapore Plant, but the preparation of test pieces with a different formulation took place at the Koriyama Plant.

(2) Background and start time of the inappropriate conduct

a. Above inappropriate conduct [1]

(a) Inappropriate conduct at the time of certification acquisition

At the time of a new development, when trying to obtain a UL certification (UL94V-0) for the formulation of a product whose mass production is determined with the customer but where there was a risk that the product might not pass the flammability test with the formulation, special test pieces were prepared with additional flame retardant and submitted to the UL for certification, while the actual mass-produced product was manufactured with the formulation without the flame retardant.

Such inappropriate conduct were found with products newly registered around 1997.

(b) Inappropriate conduct after the certification is granted

Encapsulants were often requested to be customized by customers (special requests from customers) and involved repeated minor changes. Some of the raw material manufacturers discontinued the production of raw materials and some of the raw materials became unavailable, resulting in the use of alternative raw materials. These minor changes, changes in raw materials, or repetition of those changes, resulted in formulation changes, but the production and shipping remained unchanged.

In addition, many violations of the suffix rule took place relating to items registered that allowed subsequent suffix (branch number) addition (e.g., AB-C500 (++)), with products manufactured and shipped just by adding a suffix (e.g., manufactured and shipped under the item name AB-C500XYZ) in spite of a formulation change due to customization, etc.

The reasons why such inappropriate conduct frequently occurred are as follows.

- There was an incorrect perception or misunderstanding that a formulation change caused by customization was minor, and that it was acceptable as long as the change was within the same product group, and that suffixes should be used.
- Some customers deliver their own products to end users by using or indicating the item name - AB-C500, for example. If the item name changes as a result of new UL registration, the customer will be burdened with preparation of requests for specification changes, explanations, etc. to end users. As a result, customers were reluctant to accept product name changes, and suffixes were used as an easy way to meet their needs.
- Customizations and minor changes to products were frequently made, but it takes several months to obtain a UL certification, and there is a risk that product launch would be delayed if proper procedures were taken. In addition, if new registration is

performed one-by-one in response to a customization or minor changes, labor and costs (it costs approx. 700,000 to 1 million yen per registration) would increase.

It seems that such inappropriate conduct started from around 1988 at the latest.

b. Above inappropriate conduct [2]

In the Chemical Materials Division, the formulation change described in [1] above resulted in products with reduced flame retardancy. Because these products would not pass the FUS flammability test as they were, test pieces (at a level that does not affect the ID test) were prepared and submitted to the UL with additional flame retardant and with an increased amount of the non-flammable filler (filler) to reduce the flammable material (special samples).

In some cases, test pieces made from the mass-produced product designated by the UL were submitted as they were, but the results of the ID tests such as IR failed due to aging degradation of the raw materials. To avoid such circumstances, special test pieces (special samples) were prepared and submitted for the FUS.

Furthermore, in the case of the suffix-related inappropriate conduct described in [1] above, since the formulation has been changed, test pieces having the formulation of the product most likely to pass in the product group with a suffix are submitted because the products are likely to fail the ID test and the flammability test (switched test pieces).

It is confirmed that such inappropriate conduct concerning the FUS started around 1993 at the latest.

(3) Taking over inappropriate conduct

a. Above inappropriate conduct [1]

Misuse of a suffix, etc. has been used for a long time in the technical division of the encapsulants. The employee in charge said, “it was our misconception that we could change (formulation) within this range (as a suffix),” “at first I thought so,” and “except for the people who were totally involved in (UL handling), I think they thought it was OK (as a suffix) until just before (discovery of the Case)” which suggests that thinking lightly and misunderstanding of suffixes were widespread in the technical division.

In addition to those points, as mentioned above, it seems that the inappropriate use of suffixes continued for a long period of time due to customers’ desires to prevent item name changes, cost increases, etc. Because this practice had continued for a long period of time, many newly assigned young employees accepted it without having any strong doubts and continued to perform it.

b. Above inappropriate conduct [2]

As for encapsulants, each employee in charge of the products knew that certain products would fail in the FUS if he/she submitted test pieces to the UL as they were, while others would pass, but he/she did not know the details of the products other than his/her own, and information was communicated in a closed system. (Some described it as "it was a passed-down tradition like a secret recipe.") For this reason, it seems that each employee in charge of the products succeeded the conduct described in [2] above from his/her predecessor, seniors, etc. for generations. "If this were the subject of follow-up, I would have done what was said to me (by my predecessor) with this formulation" an employee in charge said.

However, such personal transfers were not always successful, and as a result, some of them failed the FUS. In addition, from around 2011 and 2012, there has been an increase in the number of cases in which items that passed the FUS in the past were rejected in the FUS because the UL judged that the results of ID tests such as IR did not match even if the products were submitted as they were.[4] If a product fails the FUS, it is forced to take a second FUS, and if the product fails the second FUS, shipping with the UL mark will be prohibited or the certification may be revoked, which has a significant impact. Therefore, at the request of the employee in charge of UL (equivalent to the employee in charge of UL in the Management Technical Section of the Kawasaki Plant) in the Management Technical Section of the Kawasaki Plant at that time, past FUS measures were integrated and summarized.

Therefore, at the Koriyama Plant, the employee in charge of the technical department in charge of UL took the lead in confirming with the employees in charge of the products what kinds of test pieces were submitted and passed in the past FUS for each item, whether it was rejected, etc., examining the past data, etc. As the result, an Excel table named "UL Follow-up Status Survey (encapsulant)" (hereinafter referred to as "management table") was created around 2015. The management table includes, for each UL registered grade, not only the timing of the FUS, the item name of the test pieces submitted in the FUS, and the results (pass/fail), but also whether the item has the highest probability of being accepted as a "most likely formulation," presence of "UL special," etc.

After that, referring to this management table, items which are likely to pass the FUS were submitted involving the employees in charge of the relevant technical division,

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[4] Although the reasons for the increase in failures are not clear, some say that the number of failures increased after the UL testing site moved from the United States to Taiwan, and that UL's testing became stricter as products that had passed before began to fail.

employees in charge of each product for preparing test pieces, and sometimes employees in charge of UL in the Technical Management Section (currently Management Technical Section) of the Kawasaki Plant.

As described above, in addition to the implementation of systematic measures based on the management table, the frequency of FUS failures for encapsulants has decreased due to the spread of updates to the management table and communication based on the management table.

(4) Inappropriate conduct related to PMC

Regarding the encapsulant, there is a process (it is called "post-mold cure" or "PMC") in which the encapsulant is further heated and cured after it is molded, and in the PMC process, inappropriate conduct were taken with respect to the customer. (However, it is not considered an inappropriate conduct in terms of the UL certification.)

Although PMC is often conducted under the condition of heating at 175 degrees (° C) for eight hours, according to the technical division of encapsulants, the longer the time spent in the PMC process (hereinafter called "curing time"), the less likely the test piece is to burn. Therefore, when there was a risk of failing UL's flammability test, test pieces submitted to the UL for certification or the FUS were cured at 175° C for 24 hours, 50 hours, or sometimes over 100 hours prior to the submission to the UL.

There is no specific agreement with the UL regarding the curing time of PMC. Therefore, even if the curing time was longer, it is difficult to say that the curing time was in violation of UL's rules. However, there are many cases where curing conditions "175° C x 8 hours" and "UL94 V-0" are specified in the delivery specification, etc. agreed with customers, and it is highly likely that the failure to comply with such conditions constitutes a violation of the agreements with customers.

In this way, the idea was widely shared within the technical division that a longer curing time was necessary to pass the UL flammability test. This is an example of inappropriate conduct that neglected the responsibility of a material manufacturer, as it seeks only to pass UL's flammability test and disregards specifications promised to the customer.

2. Resins

(1) Method and number of inappropriate conduct

a. Method of inappropriate conduct

The following inappropriate conduct were performed related to resins.

① Inappropriate conduct about certification registration

・ Cases where the item was manufactured and shipped without changing the registered grade and adding a suffix (branch number), despite a change in the formulation due to changes in the raw materials, customization in accordance with customer requests, or for other reasons.

② Inappropriate conduct in FUS

・ Cases where test pieces with a different formulation from the specified mass-produced product were submitted to the UL (replacement of a test piece).

b. Number of inappropriate conduct

During the relevant period, the Company manufactured and sold 23 UL-certified (UL94) resin for flame retardancy (11 items manufactured in Japan and 12 items manufactured outside Japan). The number of registered grade for the resin is 11, but the number of items is 23 because some of the registered grades are suffixed to different items.

Among these, the Committee has identified 21 items as being inappropriate. The remaining two items (both were manufactured in China) were found to be not inappropriate.

In the past 10 years (From February 2010 to August 2020. The FUS inadequate count in Japan is 52 and that outside Japan is 24.), the Company inappropriately submitted so-called special samples to the UL on all FUS filings.

The reason why the two items were found not to have been inappropriate despite all the FUS activities was that, in addition to the fact that the two items were not subject to the FUS, the available formulation table and interviews with the employees in charge found that [A] the formulation at the time of the certification matched [B] the formulation of the mass-produced product.

In addition, the manual to be described later (which was used at the time of the discovery of the Case) describes the formulation of three items in addition to the 21 items that the Committee has found to be inappropriate. This means that even though the item was not manufactured after some point in time, the Company engaged in special sample handling, in other words inappropriate conduct, in the FUS, resulting in 21 or more inappropriate resin items in the past.

(2) Background and start time of the inappropriate conduct

a. When inappropriate conducts started and causes of the inappropriate conduct

Most of the UL certifications for resins were obtained between 1980 and around 1990.

Resin-related inappropriate conduct began in the mid-1980s at the latest and continued since then. The two cases that caused the inappropriate conduct are as follows.

The first case is that the formulation of the mass-produced product after obtaining the certification changed from the formulation at the time of the certification without notification. Specifically, this happened with a product that obtained a UL certification using a bromine-based material. However, since the bromine-based material violated environmental regulations (halogen-free), another material was adopted. Originally, at this point, it was necessary to obtain a UL certification again for the formulation after the material change, but due to the failure to do so, test pieces were prepared using the relevant bromine-based material for the subsequent FUS and submitted to the UL.

In addition, after obtaining the certification, repeated minor changes arose from discussions with the customer about the mass production and it became impossible to maintain the flame retardancy achieved when the certification was obtained with the established formulation of the mass-produced product in some cases. Nevertheless, test pieces were prepared and submitted to the UL using the formulation (formulation that yields a better flame retardancy than mass-produced products) at the time of certification without obtaining another certification.

The second case is that after obtaining the certification, the flame retardancy deteriorated due to changes in the manufacturing processes and raw materials, and special test pieces with increased flame retardancy were prepared and submitted.

b. History of the start of the inappropriate conduct

Regarding resins, a handwritten formulation table for the purpose of inappropriate conduct was found in 1989.

It is difficult to identify the specific time when the inappropriate conduct started, based on the results of interviews with the employees in charge from the past. However, it is probable that resin-related inappropriate conduct started in 1986 at the latest due to either of the two cases mentioned in above (a).

(3) Taking over inappropriate conduct

Inappropriate conduct that began in the mid-1980s were taken over orally or through a manual (formulation table) by the succeeding employee in charge.

Specifically, an employee who joined the company in the 1990s said in an interview with the Committee, "(after joining the company and) getting work training, I was told (from the senior employee who created the handwritten formulation table) that this is how to prepare test pieces for the FUS" and "received the formulation table (for the purpose of

inappropriate conduct).” He/she also told his/her successor how to handle the FUS (use of “special samples”).

Similarly, an employee who joined the company in the 2000s said, “After joining the company, I was entrusted with the preparation of FUS test pieces and created inappropriate FUS samples (performed inappropriate conduct)” and “I was given a piece of paper (for the purpose of inappropriate conduct, formulation table) and told to prepare test pieces based on it for the FUS.” The interviewee said he/she also gave the same instructions to his/her successor.

In this manner, through verbal explanation and a formulation table (manual) provided by the predecessor, resin-related inappropriate conduct were taken over by the succeeding employees in charge for over 30 years.

(4) History after that

a. Inappropriate conduct that took place in Japan (Kawasaki Plant)

Until the Case was discovered, at the Kawasaki Plant, upon being informed that a product has been designated in the FUS, the employee in charge of the technical division prepared test pieces using the material prepared in accordance with the formulation table described in the manual (a certain amount of special sample materials are prepared and stored in cans marked “UL” by type) and submitted them to the UL (switched test pieces).

b. Inappropriate conduct that took place outside Japan (China Plant)

Resins are also manufactured in the China Plant and the China Plant is subject to the FUS.

According to the interviews conducted by the Committee, from 2005 at the latest, when the FUS inspectors visited the plant, the person in charge of the China Plant (Japanese) contacted the person in charge of engineering at the Kawasaki Plant (employee in charge of handling the UL), had resin and test pieces for response to UL prepared, and submitted them to UL (or, the test pieces prepared at the Kawasaki Plant were held in stock at the China Plant and submitted in the FUS).

3. Phenolic molding materials

(1) Method and number of inappropriate conduct

a. Method of inappropriate conduct

The following inappropriate conduct were performed related to phenolic molding materials. (Inappropriate conduct related to [1] certification registration have not been

confirmed.)

[2] Inappropriate conduct in FUS ・ Cases where test pieces with a different formulation from the specified mass-produced product were submitted to the UL (replacement of a test piece). ・ Cases in which products in the warehouse were moved away from the UL inspectors to prevent designation of products that had flame-retardant concerns and required replacement.

b. Number of inappropriate conduct

During the relevant period, the Company manufactured and sold 34 items of phenolic molding materials that were certified by UL regarding flame retardancy (UL94).

Of these, the Committee found that 11 items were inappropriate. (All are V-0 products. The count of the registered grades is 8.)

The Committee found that the remaining 23 items were not inappropriate in the FUS. (All are HB products. The count of the registered grades is 11.) However, due to the unavailability of the composition table at the time of the certification, there was no way to prove that [A] the formulation at the time of the certification matches [B] the formulation of the mass-produced product. Thus a gray area judgment was given.

In the past 10 years (From April 2010 to August 2020. The FUS inadequate count is 30.), the Company took inappropriate conduct twice (same item in both occasions). As described above, inappropriate conduct were taken twice in the FUS (one item), but as will be described later, there was a plan for inappropriate conduct in the FUS for the V-0 products (11 items). Only one item was actually inappropriate because the employee in charge made it difficult for the UL inspectors to find the product in order to avoid designation (they were hidden).

Therefore, the Committee determined that all V-0 products (11 items) were inappropriate.

(2) Background and start time of the inappropriate conduct

Phenolic molding material-related inappropriate conducts started in the early 1990s. Phenolic molding materials started to be produced at the Moka Office in March 2011, but was produced at the Kawaguchi Plant prior to that. Therefore, phenolic molding material-related inappropriate conduct started since the Kawaguchi Plant and continued even after the transfer to the Moka Office.

Although it was not possible to specify the exact time, around the beginning of the 1990s, employees in charge in the technical division conducted an in-house flammability test of

the FUS-designated products and found that the required flame retardancy was not achieved. Therefore, they tried to deal with it by carefully remaking the test pieces, etc., but when the required performance could not be satisfied, they dealt with it by adding more flame retardant to the prepared test pieces later.

(3) Taking over inappropriate conduct

The inappropriate conduct of increasing the amount of flame retardant used to meet the performance requirements in an in-house test was taken over orally by the succeeding employee in charge.

The employee in charge at the time of the discovery of the Case joined the Company in the 2000s, and was in charge of FUS immediately after joining the Company. Immediately after joining the Company, the employee was told by a senior employee that the amount of flame retardant used in V-0 products (regardless of the results of an in-house test) was increased approx. 1.5 times. Since then, the amount of flame retardants was increased automatically and test pieces were prepared and submitted to the UL in accordance with the instruction until the discovery of the Case.

As for phenolic molding materials, no specific formulation table has been found for preparing test pieces for the FUS, and no results indicating the presence of a formulation table have been obtained in the interviews conducted by the Committee. This may be because, as described above, the inappropriate conduct was simple in form, where the amount of the flame retardant was increased approx. 1.5 times for V-0 products, and a specific formulation table written in a manual was not necessary.

(4) History after that

As described above, at the time of the discovery of the Case, the inappropriate conduct was that when a V-0 product was designated, the technical division would prepare test pieces with a formulation different from that of the mass-produced product and submit them (or was to submit them) to the UL. When test pieces for the FUS were prepared, the amount of the flame retardant was increased (or was to be increased) by roughly 1.5 times that of the mass-produced product (All are V-0. A total of 11 items).

When inappropriate conduct started, test pieces with the same formulation as that of the mass-produced product were prepared, and the amount of flame retardant was increased in a subsequent process only when the required performance was not satisfied. However, at the time the inappropriate conduct were discovered, test pieces were prepared by increasing the amount of the flame retardant from the beginning, and the manner of the inappropriate conduct had changed. The Committee's investigation does not clearly show when and why

this change occurred, but interviews with employees in charge indicate that the latter action was taken in 2007 at the latest.

4. Premix molding materials

(1) Method and number of inappropriate conduct

a. Method of inappropriate conduct

The following inappropriate conduct were performed related to premix molding materials.

[1] Inappropriate conduct about certification registration

- At the time of the certification, test pieces with a different formulation from that of the product to be mass-produced and with improved flame retardancy were prepared and submitted, and a new registration was made (acquisition of certification by switching test pieces).
- Cases where the product was manufactured and shipped without changing the registered grade and adding a suffix (branch number), despite a change in the formulation due to customization in accordance with customer requests, or for other reasons.

[2] Inappropriate conduct in FUS

- Case where test pieces with a different formulation from the specified mass-produced product were submitted to the UL (replacement of a test piece).

b. Number of inappropriate conduct

During the relevant period, the Company manufactured and sold 41 items of premix molding materials that were certified by UL regarding flame retardancy (UL94). Among these, the Committee has identified 39 items as being inappropriate.

In the past 10 years (April 2010 to August 2020), test pieces were switched for the FUS related to 10 items, but there was a plan for switching the test pieces with those with a special formulation (special samples) for the 39 items determined to be inappropriate, as described later. In addition, according to the employee in charge of the technical division, it is highly likely that at the time of the application for certification, they submitted test pieces made with a formulation that is more flame-retardant than that of mass-produced products to the UL and obtained certification. In addition, the formulation was all different among the registered grade with different suffixes.

Based on the above, the Committee determined that all items described in the FUS manual (39 items considering the variations with different suffixes) are inappropriate.

For the remaining two items, there is no evidence of inappropriate conduct in the FUS. However, it was confirmed that [A] the formulation of the product at the time of

certification matched [B] the formulation of the mass-produced product. However, the formulation of one item at the time of the certification is not kept, and the formulation at the time of the certification was partially different from the formulation table found at the Moka Office for manufacturing from a long time ago. Therefore, it cannot be determined that the item is compliant, and a gray area judgment was given. Therefore, of the remaining two items, one item was found to be compliant and gray area judgment was given to the other.

In addition, the Excel data to be described later (what was used at the time of the discovery of the Case) describes the formulation of two items in addition to the 39 items that the Committee has found to be inappropriate. Thus, if we go back in time, the number of premix molding materials for which the Company took inappropriate conduct could be over 39.

(2) Background and start time of the inappropriate conduct

As described above, regarding premix molding materials, it is highly likely that there was inappropriate conduct at the time of the acquisition of the certification, and if so, the inappropriate conduct described in [1] was first taken in the 1970s. (The earliest year of manufacture and shipment of current products was 1972. Note that the premix molding materials were products of Toshiba Reinforced Plastic.)

In addition, according to the engineer in charge of the premix molding materials (joined Toshiba Reinforced Plastic in the 1980s), the formulation for FUS (more flame retardant than the mass-produced product) was predetermined for the premix molding materials, and samples for the FUS were prepared and test pieces were submitted based on the formulation.

According to the same employee, the formulation for the FUS was taken over from a senior employee, and it is likely that [2] test pieces were switched for premix molding materials for the FUS since the 1980s.

The employees in charge before that have already retired, so further interviews were not conducted.

(3) Taking over inappropriate conduct

The formulation for the FUS has been taken over by the employee in charge of UL for premix molding materials in the form of oral transmission and handwritten revisions to the manufacturing standard. However, inappropriate conduct were not taken over for some products, and even though the cause is unknown, some products were rejected in the FUS even though test pieces prepared with the formulation for the FUS were submitted. Since 2007, there have been a series of failures in the FUS, leading to the suspension of the

shipping of some UL-certified products.

In response to the series of those events, the person in charge of UL for premix molding materials compiled from scratch a formulation table that conforms to the FUS for each product in Excel data "UL Memo (Confidential)" (dated April 9, 2012).

In addition to the background to the preparation of the data, the data include the method of preparation of the test piece, the items to be checked before submitting the test pieces to the UL, the history of the FUS of the product in the past, the formulation of the product which was conformed in the most recent FUS, and the items to be especially noted for the product.

The relevant data was stored in Excel format in the shared folder of the Moka Office and was accessible to all members of the technical division.

In the subsequent FUS, they made it a habit to prepare test pieces based on the formulation described in the data, and the pass rate of the FUS improved to almost 100%.

(4) FUS response at the China Plant

Premix molding materials are also manufactured in the China Plant and underwent the FUS. According to the interviews conducted by the Committee, at least when the FUS inspectors visited the China Plant in 2019, the employee in charge at the China Plant (Japanese) contacted the employee in charge of technologies at the Moka Office (employee in charge of handling the UL) in advance, and the Moka Office prepared UL application test pieces, had them sent to China in advance, and submitted the test pieces sent in advance to the UL.

In this manner, even with the products manufactured and shipped in China, the switching of test pieces specified in [2] took place.

5. Insulating Varnish

(1) Method and number of inappropriate conduct

a Method of inappropriate conduct

For the insulating varnish, the following inappropriate conduct were performed.

[1] Inappropriate conduct about certification registration ・ Cases where items with suffixes were manufactured and sold for registered grades without suffixes (branch numbers). (misuse of suffix)

[2] Inappropriate conduct in FUS ・ When one product with a suffix was specified, the test piece from the same product

group that was likely to pass (typical model) was submitted to UL in place of the product. (replacement of a test piece)

b Number of inappropriate conduct

During the relevant period, the Company manufactured and sold 49 products that were certified by UL regarding insulation (UL1446).

Among these, the Committee has identified 8 items as being inappropriate regarding the above [1] and [2]. 3 items were applicable to the above [1] and 7 items were applicable to the above [2]. 2 items out of 3 items applicable to the above [1] were also applicable to the above [2].

Among the 7 items in the above [2], 2 items recorded as different items were submitted in FUS during the past 10 years. On the other hand, although such records were not confirmed for 5 items, as described in (2) b below, there was a high possibility that different test pieces were submitted to FUS at some point in the past, and it was confirmed that the results of IR analysis of the items were inconsistent with the results of IR analysis registered in the UL by the internal tests. Therefore, we judged that the items were inappropriate.

Among the remaining 41 items excluding the 8 items judged inappropriate, it is highly possible that different test pieces were submitted to FUS instead of 5 items at some point in the past, as described later in (2) b. However, considering the fact that it was confirmed that the results of IR analysis of the items were consistent with the results of IR analysis registered in the UL by the internal testing, and that the possibility was not zero that these items were not subject to FUS from the beginning, we were not able to conclude that inappropriate conduct described in [2] were performed. Therefore, we judged they were in a gray area.

We judged that the remaining 36 items were not inappropriate.

As for the insulating varnish, China Plant had produced insulating varnishes until around December 2019. However, there was no record of inappropriate conduct in FUS over the past 10 years, and test pieces were prepared and submitted at the China Plant, not at the Kawasaki Plant where inappropriate conduct were performed. Therefore, we were not able to conclude that inappropriate conduct were performed at the China Plant.

(2) Background and start time of the inappropriate conduct

a Regarding the above inappropriate conduct [1]

To use a suffix, UL certification must be obtained with a format to use a suffix such as "AB-C500 (++)." However, some registered grades were not registered in such way.

Nevertheless, 3 items with different suffixes depending on the amount of solvent were manufactured and sold. (Other than the 3 items, there were similar items that were discontinued in the past.)

Such inappropriate conduct started when the manufacture and sales of these items newly started with suffixes. It is confirmed that the start of such inappropriate conduct was around 1985 at the earliest. Therefore, it is considered that inappropriate use of suffixes has been performed since around this time.

Because such inappropriate conduct began about 35 years ago, and no one, including retirees, knew the situation at the time, we were not able to confirm the background and so on.

b Regarding the above inappropriate conduct [2]

The beginning of the conduct described in the above [2] was that, in response to a request from a customer for viscosity adjustment or blackening of an insulating varnish, a new product was made by increasing a solvent or adding a pigment to a product registered in UL. Although the addition of solvents and pigments was permitted under the UL rules, if IR of a newly developed product changed from that of the original registered product, additional IR registration was required. However, neglect of such additional registration led to the submission of test pieces of other products having the same IR to avoid failures in FUS. It seemed that such processes had successively been practiced as a custom. As the reason for the neglect to register additional IR, engineers in charge said, "Predecessors thought they did not have to register IR for minor changes," "They did not deal with those because they were troublesome," and so on.

Regarding the conduct described in the above [2], through interviews with engineers in charge, it was confirmed that the inappropriate conduct had been committed since around 1991 at the latest.

As described in Section 4-1 (3), it seemed that, around 2015, an operation was also performed on the insulating varnish to summarize which test specimens were submitted and passed or failed in the past FUS for each item. As the result, an Excel table named "UL Follow-up Status Survey (insulating varnish)" (hereinafter referred to as "varnish management table") was created.

The varnish management table described for each of the items that "Picked up routine items are handled as they are" (Normal handling, not an inappropriate conduct) and "Typical models are fixed and used" (That means when a suffix is specified in a product group, the specified product is not submitted but a product that passes the test (typical model) is submitted. That corresponds to the above [2].) And for the part described

"Typical models are fixed and used," the reason was stated that "Because IR varies with the amount of styrene," the product "must be fixed to" the typical model, and so on. Therefore, in view of the fact that the varnish management table summarized past FUS handling as described above, it is highly possible that the above [2] was performed for products described as "Typical models are fixed and used" (10 items) in any of the past FUS. The above 10 items have been manufactured for the last two years, but the varnish management table also includes other items whose production had been discontinued in the past. Thus, it is highly possible that the conduct described in the above [2] was also committed in such items in the past.

(3) Taking over inappropriate conduct

a Taking over the above inappropriate conduct [1]

For the conduct in the above [1], it seems that the engineers in charge in the past did not recognize or poorly recognized that they were using the suffixes inappropriately. This product is an insulating varnish of the type called an electric wire varnish. It has not undergone development for about 20 years, and only manufacturing and sales have been continued. Therefore, no person familiar with this product exists in the Chemical Materials Division. Under these circumstances, it is probable that they did not grasp and recognize the violation of the rule.

Therefore, as for the above [1], they did not take over the inappropriate conduct.

b Taking over the above inappropriate conduct [2]

For the insulating varnish, unlike other products, test pieces submitted in FUS were prepared by the Quality Control Section in accordance with instructions from the Technical Department. Therefore, the act of replacing test pieces with one from a different product was also performed by the Quality Control Section.

In around 1991, it had already been planned that test pieces of insulating varnish would be made in the Quality Control Section. However, because the previous situations were unknown, the background about whether the test pieces were made in Quality Control Section is unclear.

For the conduct in the above [2], it seems that, in addition to the successive engineers in charge in the technical department, among the person in charge in the quality control section as described above, taking over was basically performed by oral communication stating that such product had to be submitted as the test pieces when this product was specified in FUS.

6. Resin Board for Electric Products

Kyocera manufactures and delivers insulation plates made by heating and pressure molding premix molding materials (hereinafter referred to as "resin boards for electric products"). Although resin boards for electric products have not obtained UL certification, as they meet UL standards for flame retardancy, there were some descriptions on the websites, etc. as UL94 "Equivalent to V-0."

Such description itself is not an inappropriate conduct in relation to the UL. However, it is not appropriate that though it has not been verified that the actual performance is equivalent to V-0 grade in UL94 through a flammability test and so on, a catalog and so on described that the product is UL94 "Equivalent to V-0" in that it satisfies the UL standard because the premix molding materials (having flame retardancy) is formed into a board.

In this regard, we interviewed several engineers in charge (including previous engineers in charge) at the Moka Office, which is manufacturing resin boards for electric products. Many of them clearly stated that they must have conducted flammability tests to describe them in catalogs and so on, and their testimonies are generally consistent with each other. However, though resin boards for electric products have been manufactured and sold since the 1970s, we were not able to find objective information showing that the Company had actually conducted internal flammability tests to verify the actual performance.

Therefore, the Committee was not able to conclude that there was no problem with such catalog description about resin boards for electric products.

In addition, even though encapsulants, resins, insulating varnishes, and phenolic molding materials have not been tested, they were sometimes declared to customers as "equivalent to" UL certification such as "Equivalent to V-0," "Equivalent to HB," and so on. These activities are not considered to be inappropriate in relation to the UL. However, the fact that a product was commercialized without conducting internal tests (not mentioning the product was untested) and the fact that a product was stated as equivalent to UL certification in the specifications and so on were acts of betraying the reasonable expectations of customers and was inappropriate in the relationship with customers.

7. Laminated Plates

(1) Outline of laminated plate products

Laminated plates are resin molded products made from paper or glass fabric as the substrate, and used for insulation purposes. They were certified by the UL (UL94). They have been manufactured for many years since the era of the predecessor of Toshiba

Chemical, Toshiba Corporation Chemical Material Division. However, they were already discontinued in 2011.

(2) Details of inappropriate conduct

In the process of the investigation by the Committee, it was confirmed that inappropriate conduct were also performed for some products of these laminated plates.

According to the document named "Report on the implementation status of UL Follow-up Services," about laminated plates, as of November 5, 1980, the terms "special" and "routine" ("routine" seems to mean the submission of mass-produced product) were already described for each product that was subject to FUS. And thereafter, descriptions such as "special" and "UL special" were occasionally seen in the document. In addition, in the interviews conducted by this Committee, some persons stated that they submitted different test pieces of laminated plates, and others stated that they heard that special products of laminated plates were submitted to UL in the late 1970s.

Therefore, it is confirmed that, for some products of the laminated plates, inappropriate conduct to submit test pieces with different formulation in FUS were performed by the late 1970s at the latest.

However, about the laminated plates, the production had gradually been withdrawn, and as mentioned above, the Chemical Materials Division ceased the production around 2011.

8. Brief Summary

Inappropriate conduct in each product are as described above. The recognition and involvement of directors of Toshiba Chemical and Kyocera Chemical, as well as executives of Chemical Materials Division are described in detail in "Section 5 Involvement and recognition of successive executives" below. However, each inappropriate conduct was not based on clear instructions and orders from superiors, but was made a routine in each workplace, and was taken over from seniors to juniors and from predecessors to successors as if it were a normal business process. The Management Technical Section of the Kawasaki Plant, which was in charge of the overall contact for FUS handling, was not in a position of control for the inappropriate conduct, but rather in the position of a hub for UL responses and information. It can be said that the inappropriate conduct was taken over mainly through the "sectionalism" of the engineers in charge.

Dan Ariely, a leading behavioral economist, mentioned as below in his book "THE (HONEST) TRUTH ABOUT DISHONESTY" (translated by Yuko Sakurai/Hayakawa Publishing Corporation, 2012).

- Cheating has infectivity. Thus by witnessing other people's problematic behavior, you

can find that it may increase.

- When a cheater belongs to the same social group as us, we identify ourselves with the cheater, and feel that cheating is more socially acceptable.
- When we see someone in our social group acting out of tolerance, we will make a fine adjustment of our moral compass according to that, then will adopt their activity as a norm. If someone in the group is an authoritative person - a parent, a boss, or any other person you respect -, you are even more likely to be dragged along.

The inappropriate conduct is a case to which the above point strongly applies. And it can be said that since the era of Toshiba Chemical, the infection of inappropriate conduct had been gradually spreading and penetrating in each workplace.

Next, the number of items for which the inappropriate conduct was performed is summarized in the following table.

Meanwhile, the UL withdrew the Company's UL certification (UL94, UL746, UL1446) for registration on a total of 465 items, as of March 17, 2021. The UL certification was withdrawn for encapsulants, resins, phenolic molding materials, premix molding materials, and insulating varnishes.

	Inappropriate	Appropriate	Gray	Start Time of Inappropriate Conduct
Encapsulant	379	2	(16)	From 1988
Resin	21	2	(0)	From 1986
Phenolic molding materials	11	0	(23)	From the early 1990s
Premix molding materials	39	1	(1)	From 1972
Insulating varnish	8	36	(5)	From 1985

* As mentioned at the beginning of Section 4, the above shows the number of products that have been manufactured in the last two years.

* The start time of the inappropriate conduct is the time that was able to be confirmed in the investigation of the Committee. The inappropriate conduct may have been

committed before that.

* The number of items from which the UL certification was withdrawn does not match the total number (number of items) with the above inappropriate conduct, because the registered grades in UL had been withdrawn, the resulting suffixes of the appropriate items in the product group also had been withdrawn from UL certification.
* Regarding the Gray, see III. 3. Gray area judgment

V Involvement and recognition of successive executives

1. Introduction

As described above, the inappropriate conduct were continuously committed at multiple business sites for more than 30 years while the corporate group and company names changed from Toshiba Chemical, to Kyocera Chemical (August 2002 -), to Kyocera (April 2016 -).

In the process, it is thought that not only the on-site employees but also the directors of Toshiba Chemical and Kyocera Chemical, and the executive members of the Chemical Materials Division (hereinafter collectively referred to as "executives") had occasions to recognize or to be able to recognize the inappropriate conduct. The investigation of the Committee also found that there was such an opportunity (an occasion to know that a special sample whose formulation was different from that of the mass-produced product was used in FUS).

Hereinafter, these situations will be discussed in terms of [1] objective facts and [2] subjective view (recognition) of executives. The abbreviated names of Kyocera Chemical's directors (some of whom have been directors since the days of Toshiba Chemical) mentioned in this section are as follows.

Mr. A	Former Director of Kyocera Chemical (KCC) (June 2001 - June 2010)
Mr. B	Former Director of KCC (June 2002 - June 2012). Representative Director from April 2010 to March 2012
Mr. C	Former Director of KCC (June 2010 - March 2016). Representative Director from April 2012 to March 2016, General Manager of Chemical Materials Division until June 2016
Mr. D	Former Director of KCC (April 2015 - March 2016). April 2016 - Deputy General Manager of Chemical Materials Division (present post)
Mr. E	Former Representative Director of KCC (June 2001 - June 2010)
Mr. F	Former Director of KCC (August 2002 - March 2013). Representative Director from April 2009 to March 2013

Mr. G	Former Director of KCC (June 2010 - March 2016)
Mr. H	Former Representative Director of KCC (August 2002 - March 2009)

2. Objective facts

The Committee has found materials made in or after 2009 that suggest that directors at the time recognized or could have recognized the inappropriate conduct.

It is said that around 2008, UL's FUS facility moved from the United States to Taiwan, and the Committee's interviews found that, after the facility was moved to Taiwan, even samples that had previously passed FUS were rejected (NG), leading to confusion.

It is believed that this situation has been the background to the increase in reports on UL responses and issues since 2009.

(1) Objective facts that occurred in 2009

On October 28, 2009, an E-mail with addressees including Mr. A and Mr. B, both being directors of Kyocera Chemical at the time, noted that UL's FUS approval had been obtained by using special products (special grade, etc.) instead of regular products (mass-produced goods). Furthermore, whereas the UL requires a registration for each different formulation, the email mentioned that products with different formulations had been registered under suffixes, by claiming to the UL that their differences were other than their formulation. In a series of e-mails, Mr. A has acknowledged that this issue will be "Critical to the existence of the Company".

The recipients of this E-mail included Mr. C, who later became the President and CEO, as well as Mr. D, who later became a director.

In addition, the materials presented to the CS Improvement Committee of Kyocera Chemical held on the following day clearly indicated that in the case where FUS was rejected twice, samples of different formulation were submitted for the 1st, 2nd, and the 3rd time respectively, by showing their formulation table. Furthermore, the minutes of the committee also pointed out the possibility that the formulation of the UL registered items might have been changed and that the problem was just the tip of the iceberg and there were more. Those present at this committee meeting included Mr. E, who was the Chairman of the Board and Mr. F who was the President of the Company at the time.

In addition, materials distributed in the Comprehensive meeting held on Nov. 5, 2009 (monthly meeting attended by department managers and above to report on business performance, new product development status, and problems, etc.), contained a listing under the title of "UL Problem List" describing that 7 products were facing problems in FUS (FUS rejection). The "Future Action" column for two products in this table mentioned

that “Test pieces will be produced with special formulation.” Many directors, including Mr. E and Mr. F, also attended this meeting.

(2) Objective facts that occurred in 2010

On April 1, 2010, in E-mails which included Mr. F (President), Mr. A, Mr. B, and Mr. G, all directors at the time, exchanges were made to the effect that under the current conditions, it would not be possible to pass the test to replace the UL registration grade ID which may cause severe damage to the customers. However, being unable to produce samples that can pass the UL test using the same materials as the mass-production product, discussions were conducted to produce samples which used bromine-based flame retardants (halogen) which were not used in mass-production products.

In the end, ID replacement was abandoned, and using different materials from the mass-production product to pass the UL test did not take place. However in consideration of these discussions taking place, it is possible to infer that formulation was adjusted to deal with FUS.

(3) Objective facts that occurred in 2011

In materials distributed in the Comprehensive meetings held in October, November, and December of 2011, there is a page that mentions “Progress status of UL nonconforming products” indicating problems (rejection) in FUS for 5 products (increased to 8 products in the materials for December).

The same materials (for October, November, and December) all mention “Shipment suspension if NG (this is not acceptable)”, “send special sample if negotiation fails?” as a specific response for one product.

(4) Objective facts that occurred in 2015

On June 25, 2015, an E-mail was sent from the then Director Mr. G to the employee in charge for UL, to list up all the issues related to the UL. The reply to the above from the person in charge for UL mentions “Plan is being made to take the 2nd FUS using samples that match the (UL) registered data” and “2nd FUS being taken by claiming that the samples submitted were mistaken. Response will be made by replacing the samples”. Thereafter, the person in charge for UL explained the current situation to Mr. G, using materials prepared by himself, and this mentions “Regarding UL related matters, basically, work is being conducted in compliance with laws. The material also mentions that a state of **tacit approval** existed for cases where rectification is necessary but where it was difficult to make immediate rectifications (**coping with special samples**, etc.)”. “Regarding the

handling of negative legacy (by specially coped items) from the past", "**secret recipe management** and inheritance system", "regarding internal and external (including UL) information management (how to manage information and prevent leaks)". (Bold and underline text provided by the Committee)

On this point, Mr. G mentions that "Basically, I reported everything regarding our response to special samples to Mr. C (President)". "I went to the President's Office to report. I recall I told him that it will cost a great deal, but that it had to be dealt with. There were 3 of us, President C, Mr. D, and me."

3. Subjectivity (recognition) of senior management

(1) Recognition of each President

A. Introduction

The Committee conducted interviews with 3 former presidents of Toshiba Chemical and Kyocera Chemical. Mr. E (from June 2001 to June 2005 and from April 2006 to March 2009[5]), Mr. F (from April 2009 to March 2012), and Mr. C (from April 2012 to March 2016[6]), to confirm the recognition of the inappropriate conduct contained in the abovementioned objective facts (progress of facts backed by documents, since 2009).

In the interviews conducted by the Committee, Mr. E, Mr. F, and Mr. C all answered that "they were not aware of any inappropriate conduct being conducted." However, the circumstances differ for each person and individual examinations were conducted as follows:

B. Regarding Mr. E

Mr. E attended the CS Improvement Committee held on October 29, 2009 where materials distributed at the committee indicated that samples of different formulations were submitted for the 1st, 2nd, and 3rd FUS. The materials for the Comprehensive meeting which he also attended state that there were multiple products that were rejected in FUS and the response for some will be made by "preparing test pieces using a special formulation." Looking at these materials (and hearing explanation based on the materials) raises the question of whether these people were aware that samples of different

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[5] Mr. H (deceased) was the President from June 2005 to March 2006. We have not found any materials or testimonies that show that he had any recognition of the inappropriate conducts, and we have judged that he was not aware of the inappropriate conducts.

[6] Kyocera Chemical was merged with Kyocera in April 2016 and became the Chemical Materials Division of Kyocera.

formulations from mass-production products were being submitted in order to avoid FUS rejection. In addition, in interviews conducted by the Committee, several persons have stated that Mr. E could have been aware of the inappropriate conduct.

On this point, although Mr. E admitted he had attended the CS Improvement Committee and the Comprehensive meeting, he has stated that he was not aware of any problems regarding UL during his tenure. He also stated that he had no memory of hearing terms such as "special samples" or "special formulation."

Mr. E comes from a Toshiba group company, and he became the President of Toshiba Chemical after a stint as the President of Iwate Toshiba Electronics Co., Ltd. This being the case, he claims he has had no working experience in the chemical business, with no knowledge or technical knowledge of the products in question and had almost no knowledge regarding the UL. In the interviews conducted by the Committee, he stated that his recognition could have been that even if the materials listed that samples of different formulations were submitted to the UL, that this was made within an acceptable range and he had not recognized any inappropriate conduct being conducted (and thus, they did not remain in his memory).

As mentioned earlier, materials distributed in the meetings attended by Mr. E show formulation tables with different formulations and mention "preparation of test pieces using special formulation." However, considering the knowledge of Mr. E, it cannot be said that he would immediately recognize any inappropriate conduct from this table. Furthermore, in the interviews with the Committee, no person has emerged who has reported to Mr. E that "inappropriate conduct were being conducted and require remedy" in FUS, nor discussed with Mr. E regarding "inappropriate conduct." Forensic Investigation did not reveal any E-mails or documents that would directly indicate that Mr. E was aware of "inappropriate conduct."

Therefore, it cannot be said that Mr. E was aware of the inappropriate conduct.

C. Regarding Mr. F

Mr. F, like Mr. E, attended both the CS Improvement Committee held October 29, 2009 and the Comprehensive meeting in November of the same year. In 2010, Mr. F was consulted whether to prepare samples for submission to UL using a material which was not used in mass-production products. Furthermore, materials for the Comprehensive meeting in 2011 mention "send special sample if negotiation fails?" for 3 consecutive months. These facts raise the question of whether Mr. F would notice that samples of different formulation than the mass-production products were submitted to avoid rejection in FUS, or at least, that some kind of improper acts were being taken. In addition,

in interviews conducted by the Committee, some have stated that Mr. F could have been aware of the inappropriate conduct.

On this point, similar to Mr. E, Mr. F admitted he had attended the CS Improvement Committee and the Comprehensive meeting, however, he was not aware of any UL problems during his tenure. He also stated that he had no memory of hearing terms such as "special samples" and "special formulation," nor had any recollection of the E-mails in 2010.

Mr. F came from Kyocera and had been handling ceramics (inorganic materials) and had no working experience in the chemical business. He stated that he had no knowledge or technical knowledge of each product that was in question. In addition, he stated he had almost no knowledge of the UL. This being the case, similar to Mr. E, he stated that even if reports were made regarding the UL, his recognition was that things were probably being taken care of within the accepted range (and thus he had no recollection). The E-mails in 2010 mention the preparation of samples using materials not used in mass-production products, but in the end, this was abandoned, and no inappropriate conduct were made. Mr. F himself, on other occasions strongly pursued inappropriate conduct[7] and judging from this, there is a possibility that Mr. F did not recognize that the use of materials not used in mass-produced products was "improper." Similar to Mr. E, the investigation by the Committee could not find any person who reported FUS inappropriate conduct to Mr. F, or discussed remedies for "inappropriate conduct" with Mr. F. No E-mails or materials that will allow the direct recognition of "inappropriate conduct" could not be found in the Forensic Investigation.

This being the case, it cannot be said that Mr. F was aware of the inappropriate conduct.

D. Regarding Mr. C

Mr. C received the E-mail dated October 28, 2009. He also attended the aforementioned Comprehensive meeting as a department manager. Furthermore, in the interviews conducted by the Committee, directors Mr. G and Mr. D stated that they have reported in person to Mr. C about responding with special samples in 2015. In addition, Mr. B, who served as the director in charge of technology for a long time, also stated that Mr. C was aware of the inappropriate conduct.

Regarding the E-mail dated October 28, 2009, Mr. C stated that, at the time, he was in charge for functional materials and had no relationship with the UL, so his memory could

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[7] The Forensic Investigation has revealed multiple E-mails reprimanding inappropriate responses and demands for reports.

be weak. As for the Comprehensive meeting, he stated that he was aware that samples had been submitted many times to the UL, but he did not recall the expression "special" appearing often. Had focus been made on the term "special," it would have naturally led to discussions to stop it. But he did not have such a strong recollection of it. As for the reporting from Mr. G in 2015, he said, "I do not recall it. It could have been Mr. G or the employee in charge of UL, however, the employee would not come directly to me, so it would have been Mr. G who would come to me. But I have no recollection of discussing this subject with him." Overall, the response was "I don't remember."

However, Mr. C joined Toshiba Chemical in 1982 and had a career as an encapsulant engineer up to around 2000 and thereafter, was in charge mainly of the management of encapsulants. He has knowledge of products in question. The inappropriate conduct was especially a big issue for encapsulation. It is difficult to believe that Mr. C, who was an encapsulation engineer and had technical knowledge even before assuming the post of director, was totally unaware of the UL issue. That Mr. C stated that he "did not remember" without denying the facts had a totally different meaning from the "did not remember" stated by Mr. E and Mr. F, who had no technical knowledge. In particular, regarding the report from Mr. G in 2015, Mr. C stated that while he "had no recollection" of receiving the report, he did not deny the fact. Mr. G stated that he reported use of special samples to respond to the problem to Mr. C and when asked what Mr. C's response was when the report was made "Did he seem surprised? Did he seem to be aware of it from before?" Mr. G said, "He gave me the impression that he seemed to know the details much more than I did". Mr. D also stated that (When Mr. D consulted Mr. C about the inappropriate conduct around the end of 2015) President C was aware that (samples with) different formulation had already been submitted. He knew the details far before me, and also knew what kind of operation had been conducted. It was like "that's the way it's done." President C also told me "not to let it spread any further."

From the above, although there are no objective materials to directly substantiate that Mr. C was aware of inappropriate conduct taking place, the Committee believes that Mr. C was aware of the inappropriate conduct.

It should be noted that although Mr. C has stated that he was not aware of the inappropriate conduct, in the discussions conducted during the interviews with the Committee regarding the inappropriate conduct, he said, "Although I served as the president, I should have stopped it with a strong conviction, and should have followed it to the very end. I lacked the strong will to stop it and to be responsible to see it till the very end", "It is my responsibility for having left this negative legacy. I lacked the awareness to carry it to the end."

(2) Recognition of other directors

It can be said that Mr. B, who served as a director from June 2002 to June 2012 (and Representative director from April 2010 to March 2012) and the General Manager for R&D since June 2008, had come to recognize the inappropriate conduct by 2009, at the latest.

Mr. G, who served as a director from June 2010 to March 2016 became aware of the inappropriate conduct by receiving a report from the person in charge for UL by 2015, at the latest. As mentioned previously, Mr. G stated that he had reported the inappropriate conduct to Mr. C, the President at the time.

Mr. D, who served as a director from April 2015 to March 2016 will be discussed in (3) below (later).

In addition, interviews were conducted with the director in charge of legal affairs from August 2002 to June 2010. However, he was not considered to have recognized the inappropriate conduct.

The above lists all the former directors of Kyocera Chemical interviewed by the Committee. The recognition of other directors is not known.[8]

(3) Recognition of General Managers and Deputy General Manager

A. Recognition of General Managers

In April 2016, Kyocera Chemical was merged with Kyocera and became its Chemical Materials Division.

After the merger, the top post of the Chemical Materials Division was the General Manger, The second in command was the Deputy General Manager. Immediately after the merger, Mr. C (President of Kyocera Chemical at the time of the merger) assumed the post of General Manager, and was succeeded by Mr. I (from July 2016 to December 2018), and then by Mr. J (from December 2018 to present).

The Committee conducted interviews with both Mr. I and Mr. J. However, both stated that they were not aware of the inappropriate conduct. Both are full-time employees of Kyocera, and have no technical knowledge of the products subject to the inappropriate conduct (encapsulants, resins, phenolic molding materials, premix molding materials and insulation varnish). Investigations conducted by the Committee could not find any

[8] Notwithstanding the above, from the results of objective data and interviews, the Committee has contacted former directors by prioritizing those who seemed to indicate a higher necessity (those with high possibility of being involved in the inappropriate conducts). Although some of the respondents (retired) declined to accept the interview, we believe that cooperation has been generally obtained.

materials that links both of their recognitions to the inappropriate conduct. In addition, results of the interviews have not turned up any information showing that they were aware of the inappropriate conduct.

Therefore, it is considered that both Mr. I and Mr. J had no recognition of the inappropriate conduct until the discovery of the Case.

B.Recognition of the Deputy General Manager

Mr. D served as a director of Kyocera Chemical from April 2015 to March 2016.

In the interview with the Committee, Mr. D has admitted that he had received a report around the end of 2015 from the senior manager of the Technical Department that the method of the UL certification for encapsulants was wrong and that there were products that had insufficient flame retardancy (admitting the acknowledgment of inappropriate conduct). Although Mr. D said, "I instructed additional registrations of references (IDs to be submitted to the UL and owned) even if it will cost a lot of money," "since it had been in operation in an inappropriate manner for a long time, the instruction may not have reached the very end." He also stated that he had not confirmed whether the corrections had been carried out. On the other hand, Mr. D denies his acknowledgement of the inappropriate conduct prior the end of 2015 and stated that he had acknowledged "special samples" as samples produced within the allowable design range (with no awareness of doing anything wrong). However, it is difficult to believe that Mr. D, with his technical knowledge, would think that a "special sample" was an item within the allowable range, unlike Mr. B and Mr. G, who were informed of the same information given in the meeting they all had attended. In addition, Mr. D is a recipient of the E-mail dated October 28, 2009. It is also difficult to believe that the readers of this E-mail would acknowledge that the "special grade" mentioned would be those within the allowable range.

Therefore, it is believed that Mr. D knew about the inappropriate conduct by around 2009, at the latest. Mr. D also stated that he had not made any explanation or reports to Mr. I or Mr. J regarding the inappropriate conduct. As mentioned previously, Mr. I and Mr. J, who both assumed the position of the General Manager, are full-time employees of Kyocera and do not have a full grasp of the history of the UL problem, as well as not having any technical knowledge of products handled in the Chemical Materials Division. Mr. D, the Deputy General Manager who knew the history and had technical knowledge should have provided explanation and reports regarding the inappropriate conduct to both.

4. Brief Summary

As described above, the Committee finds that even after 2009, when confirmation of facts was made possible with respect to former directors based on objective materials, multiple persons at the executive level (including the representative director) were aware of the inappropriate conduct. On the other hand, although facts indicate that those at the executive level did not actively seek to remedy the inappropriate conduct and had remained tacit, we were unable to substantiate any instructions or orders to conduct the inappropriate conduct to the person in charge of each product.

It is probable that executives who were aware of the inappropriate conduct did not unconditionally approve the current situation in which the inappropriate conduct were being carried out but were aware that some kind of corrective measures were necessary. In fact there were directors such as Mr. A, who were aware that the inappropriate conduct "could become critical to the existence of the Company", or Mr. G, who tried to grasp the actual situation regarding the UL response and instructed employees in charge to report all issues concerning the UL. Other than the above, there are traces that every couple of years, executives and employees in charge had made movements or started discussions (to grasp the actual situation as a preface of corrective measures) for correction of the inappropriate conduct.

However, faced with the gravity of the continued and accumulated inappropriate conduct and the difficulty in resolving the matter, there were no executives who thought of fully correcting the inappropriate conduct at their own responsibility, and as a result, no moves to correct the situation were made. Furthermore, there were no moves taken to report and consult the matter directly within Kyocera itself. This being the case, the inappropriate conduct continued without being corrected for more than 30 years.

As can be seen above, the inappropriate conduct were not limited to the problem of the worksite employees but should be said to be more of a huge problem created by successive executives (who had let it continue without correction for many years).

VI Results of surveys on other divisions

1. Summary of surveys on other divisions

There are other divisions (business divisions) within the Company group that have acquired UL certification in addition to the Chemical Materials Division.

Therefore, the Committee conducted a questionnaire covering a total of 74 employees working in other divisions, to check the existence of similar incidents.

2. Results of surveys on other divisions

(1) Response suspected of being a similar case (1 case) and interview with the respondent.

The contents of the questionnaire and the responses conducted at other divisions are as shown in VII, 2 (2) of this Investigation Report.

As a result, 1 response[9] was obtained, that was suspected to be a similar case, based on the response made to the questionnaire. It mentioned that in printed circuit boards handled by the other division (hereinafter "Subject Division") mass-production products were pressed under a higher temperature than the press temperature (upper limit temperature) registered with the UL when the UL certification was obtained. However, at the time of FUS, the Subject Division had reported that the press was being conducted within the upper limit temperature registered with the UL and not at the actual press temperature.

(2) Evaluation of the case and future response

In the Subject Division, a falsified reporting in FUS has been made to the UL and constitutes an inappropriate conduct.

However, according to the standards of the material manufacturer, the manufacturer has recommended that the subject product be pressed in excess of the press upper limit temperature and the mass-produced product is considered not to be inferior in terms of performance or safety than those manufactured under the production process where the UL certification was awarded. In addition, the discrepancy in the UL registered contents and the mass-production product manufacturing process is inferred to be an error made at the time of registration, and is not considered to be of inappropriate intent, such as the falsification of performance.

This being the case, the subject inappropriate conduct is not considered to be highly malicious. However, the practice itself is inappropriate and the press upper limit temperature registered with the UL should be promptly corrected. Therefore, the Committee has informed Kyocera to check whether similar inappropriate conduct are being conducted in products with the same UL registration grade with those where inappropriate conduct have been found and for products using the same materials. Kyocera has already started the checking process.

For the product where the inappropriate conduct has been found in the checking process,

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[9] In addition, there were 2 more cases that listed inappropriate response for the UL, however, both of them had taken place about 15 years ago and have been explained and resolved with the UL.

Kyocera says it plans to apply for recertification from the UL by correcting the upper limit temperature.

(3) Other UL related inappropriate conduct

Other than the single case in the Chemical Materials Division found in the investigation conducted by the Committee, there were no other cases of the UL related inappropriate conduct nor facts that indicate suspicious inappropriate conduct in the other divisions.

VII Results of the questionnaire survey

1. Outline of the survey

(1) Questionnaire for employees involved in the Chemical Materials business

A questionnaire survey was conducted on a total of 545 employees engaged in the Chemical Materials business and to employees who had been engaged in the Chemical Materials business in the past, regarding this case and the existence of similar cases, etc.

- ○ Implementation period February 8, 2021 through February 22, 2021
- ○ Subjects 545 persons
- ○ Total number of recovered responses 545 (confirmed on March 29, 2021)
- ○ Response rate 100.0%

(2) Questionnaire for employee in charge of UL in other divisions

The Committee, for the purpose of investigating any presence of similar cases in other divisions handling the UL certification, conducted a questionnaire survey covering a total of 74 employees currently engaged in the UL certification registration or the FUS inspection or who used to be engaged therein in the past in other divisions.

- ○ Implementation period March 1, 2021 through March 15, 2021
- ○ Subjects 74 persons
- ○ Total number of recovered responses 74 (confirmed on April 19, 2021)
- ○ Response rate 100.0%

2. Collected results

The collected results of the abovementioned questionnaire are as follows: More than 400 respondents provided opinions, comments, etc. on Question 5 (open ended question regarding the cause of inappropriate conduct) and Question 6 (open ended question for recurrence prevention measures, etc.) of the questionnaire for employees related to the chemical materials business. Contents listed in the questionnaire response have been cited

appropriately in this report, as well as being used as a starting point of the investigation.

(1) Questionnaire for employees involved in the Chemical Materials business

[Question 1] Regarding UL certification,

[1] Have you conducted inappropriate acts (hereinafter, "Inappropriate Acts"), such as the manufacture and submission of samples to UL with different formulation or raw materials than the actual products for the purpose of obtaining certification or to clear UL inspection?

[2] Have you seen or heard of other directors and/or employees conducting such Inappropriate Acts prior to the in-house investigation being conducted (prior to end of 2020)?

[3] Have you ever been ordered to conduct such Inappropriate Acts by other directors and/or employees? Please circle either "YES" or "NO".

YES	NO
98	447

[Question 2] For those who responded "YES" in Question 1, please fill in the product name or type of product, specific contents of the Inappropriate Acts, the period when Inappropriate Acts took place, etc., in the response space provided. (Please try to mention 5W1H as much as your memory will allow).

Response made	No response
103[10]	442

[Question 3] This question is in regard to products other than the subject product whose inappropriate conduct has been uncovered, or any certification by a third party organization other than UL certification or standards (certification and standards related to product quality such as ANSI, ISO, JIS) or regarding any agreements reached with customers.

[10] Of the 103 who responded "Response made" in Question 2, 5 had responded "NO" in Question 1. These included comments not directly related to the inappropriate acts, response to Question 4 mistakenly filled in the space provided for Question 2, and those who should have responded "YES" in Question 1.

Have you conducted any of the following Inappropriate Acts, or have you seen or heard of any directors and/or employees engaged in such acts, or have you been ordered by other directors and/or employees to carry out such Inappropriate Acts? Please circle either "YES" or "NO".

[1] ・ Manufactured samples with different formulations or raw materials than the actual product and submitted them to certification organizations for the purpose of acquiring certifications or to pass an inspection conducted by certification organizations and have actually succeeded in acquiring certification or have successfully passed the inspection of certification organizations.

・ Have prepared or revised manuals to prepare samples for submission to certification organizations (that are different from the actual products).

・ Have indicated that the product is "equivalent to" certified items, even though certification from certification organizations have not been received or in-house performance test has not been completed.

・ Have conducted acts of falsification regarding certification by third party organizations and standards, not limited to the above.

[2] In audits, etc., conducted by customers, have conducted acts of falsification such as the preparation of samples with different formulations or raw materials from the actual products and submitting them to customers.

[3] ・ Have falsified the results of pre-delivery tests, performance tests, etc., agreed with the customers or have conducted tests under different methods.

・ Not limited to the above, have shipped or delivered products that did not satisfy the quality criterion promised to the customer (falsification of performance and quality).

	YES	NO	No Response/Don't know
[1]	28	517	0
[2]	6	538	1
[3]	63	478	4

[Question 4] For those who responded "YES" to [1], [2], and/or [3] in Question 3, please fill in the product name or type of product, certification title, name of the customer, the specific details of the Inappropriate Acts, the time and period when the Inappropriate Acts took place, etc., in the response space provided. (Please try to mention 5W1H as much as your memory will allow).

Response made	No response
83	462

[Question 5] What do you think about the factors that caused these Inappropriate Acts or the factors that enabled the Inappropriate Acts to continue over a long period? Please fill in the response space.

Response made	No response
444	101

[Question 6] If there are any matters you wish to notify the Special Investigation Committee of related to this subject (points for improvements for the future, recurrence prevention measures, what is currently making you anxious, what you want people to know, etc.), please feel free to fill-in the space provided.

Response made	No response
248	297

(2) Questionnaire for employee in charge for UL in other divisions

[Question 1] Please tell us the contents of business related to UL in your business duties.

Response made	No response
72	2

[Question 2] Have you ever conducted the following Inappropriate Acts regarding UL certification, or have seen or heard of such acts by directors and/or employees, or have been ordered to carry out such Inappropriate Acts from other directors and/or employees? Please circle either “YES” or “NO”.

[1] Have prepared samples with different formulations or raw materials, submitted them to UL for the purpose of obtaining certification or to pass UL inspection, and have actually obtained certification or have passed the UL inspection.

[2] Have prepared or revised manuals to prepare samples (that are different from the actual products) for submission to UL.
[3] Have listed that the product is UL certification "equivalent item" even when UL certification had not been obtained or when in-house performance test had not been completed.
[4] Not limited to the above, have conducted acts of falsification regarding UL certification.

YES	NO
2	72

[Question 3] For those who responded "YES" in Question 2, please fill in the product name or type of product, specific contents of the Inappropriate Acts, the period when Inappropriate Acts had taken place, etc., into the response space provided. (Please try to mention 5W1H as much as your memory will allow).

Response made	No response
3[11]	71

[Question 4] This question is in regard to certification and standards by third party organizations other than UL certification (certification and standards concerning product quality such as ANSI, ISO, JIS, etc.), or regarding any agreements reached with the customers.
Have you conducted any of the following Inappropriate Acts, have you seen or heard of other directors and/or employees conducting such acts, or have you been ordered to conduct such Inappropriate Acts from other directors and/or employees? Please circle either "YES" or "NO".
* Choices [1] through [3] are identical to [Question 3] of the questionnaire for employees related to the Chemical Materials Division and are omitted.

	YES	NO
[1]	1[12]	73

[11] Of the 3 "Response made" in Question 3, one had responded "NO" in Question 2, but is considered to be a clerical error which should have been a "YES".
[12] The respondent who selected "YES" mentions in free-hand that there is no conclusive

[2]	0	74
[3]	0	74

[Question 5] For those who responded "YES" for [1], [2], and [3] of Question 4, please fill in the product name or type of product, certification title, name of the customer, the specific details of the Inappropriate Acts, the time and period when the Inappropriate Acts took place, etc., in the response space provided. (Please try to mention 5W1H as much as your memory will allow).

Response made	No response
1	73

[Question 6] Please feel free to fill the space provided if there are any matters you wish to inform the Special Investigation Committee of (what you want the Committee to know, what your current anxiety is, etc.)

Response made	No response
15	59

3. Opinions and comments of the subjects

The Committee sent out the questionnaire to more than 600 people. The number of responses received in the open ended response space exceeded 400. In the responses received, many valuable responses were found which will prove to be good references, such as the cause of this problem, the problems with organizational culture, issues facing the workplace, distress of the employee in charge, and anxiety regarding future business continuity.

The causes of the inappropriate conduct and recurrence preventive measures pointed out in these responses are as follows. The specific opinions and comments of each respondent are excerpted and summarized in a separate sheet, with due consideration given to the anonymity of the respondents (see Annex of this report).

(1) Regarding the cause of the inappropriate conduct

The following items have been raised as the cause of the inappropriate conduct (in random order).

- Lack of awareness and knowledge regarding the UL and quality assurance (Lack of

evidence.

problem awareness, absence of guilt)

- Difficulty in resolving long-standing inappropriate acts
- Absence of clear rules and education systems
- Closed organizational culture (immobilized human resources), vertically-segmented culture (personification)
- Inaction or acquiescence of superiors
- Conjecture and swallowing of orders and instructions made by superiors and seniors = Brain freeze, waiting for orders to come
- Top down command culture, communication failure
- Don't rock the boat-ism, turning a blind eye, dependency on others, culture of wholesale delegation
- Workplace where people are unable to speak up or voice their opinion ("won't take any action", "doesn't make a difference")
- Pressure to pass FUS
- Excessive cost awareness (avoiding registration costs).
- Lack of technical strength
- Containment of business by a small number of people (Concentration to Technical Department, Black Boxing)
- Encapsulant product characteristics = short product cycle
- Decline in expertise and management ability from outflow of personnel
- Catering to customer wishes (acquisition and maintenance of unrestricted UL certification)
- Insufficient permeation of (Kyocera) philosophy[13]
- Insufficient knowledge and knowhow in organic chemistry at Kyocera Corp.

(2) Recurrence preventive measures

The following are listed as recurrence preventive measures (in random order).

- Developing clear rules and systems for dishonesty prevention (quality control)
- Restructuring of the Chemical Materials Division, including personnel assignment
- Clarification and strict punishment of the persons responsible for the inappropriate conduct

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[13] The Kyocera Philosophy is a corporate and life philosophy that summarizes the management and life philosophy of the founder of Kyocera. The philosophy covers a wide range of topics, from basic management concepts to daily work practices, with "what is right as a human being" as the fundamental criterion for making decisions.

- Implementation and continuation of effective education and training
- Conducting regular (external) surveys and hearings on quality inappropriate conduct
- Development of a workplace environment that facilitates sharing, discussion, and communication of questions and problems

Chapter 3 Causes of the inappropriate conduct

I Introduction

The Committee conducted its investigation focusing on (1) why the inappropriate conduct occurred, and (2) why it (for multiple products) continued to remain undetected for longer than 30 years. Reasons and circumstances that the Committee considers to be the answers to these questions will be described below. However, before that, as a precondition, the Committee shall consider and discuss why a young employee was able to raise his voice to uncover such the inappropriate conduct that no one could speak out about for such a long period of time.

[Background of the discovery]

A young employee X, who has been involved in FUS since April 2020, was instructed by senior employees to provide UL samples prepared specially for FUS that did not represent the actual products. The employee X felt uncomfortable with this process, but at this point he wasn't immediately convinced of its unfairness. However, in September of the same year, the employee X became convinced of its unfairness when he saw the UL Application Manual (entitled UL Flame Retardant Test Manual) stored in his department specifying that samples whose composition is completely different from the actual product shall be submitted to UL's FUS.

In mid-September of the same year, the employee X consulted with his boss, section manager, about this matter (he did not likely know about the inappropriate conduct.) After that, the section manager checked with his subordinate who likely knew the situation and came to know the outline of the inappropriate conduct. The section manager was unable to take any further actions because he thought that his superiors might have acquiesced to it and for other reasons.

Around mid-October of the same year, the employee X further consulted with and reported the inappropriate conduct in an interview with his department manager. However, the manager did not take any action, stating that the same problems were occurring at the Koriyama Plant and Moka Office.

Around mid-November of the same year, at an interview with the Kawasaki Plant's General Affairs Section (belongs to a different division from the Chemical Materials Division) that

was held for the purpose of promoting the retention of young employees, the employee X was asked if he had any problems with his work. He replied by reporting this inappropriate conduct. The General Affairs Section reported this to the General Manager of the Kawasaki Plant, which started investigations with confirmation with the relevant departments. On November 20, at a meeting between the plant manager and young engineers (this meeting was held regardless of the consultation and reporting by the employee X), when the plant manager urged the attendees to speak about the incident, several young employees, including the employee X, spoke about it. Then the plant manager and the General Affairs Section confirmed that it was the case, and then it was reported to the General Manager of the Chemical Materials Division and then to the General Manager of the Corporate Ceramic Materials Semiconductor Components Group. As a result, the inappropriate conduct was made known to the Kyocera management. The series of internal processes and communications that occurred following the interview between the employee X and the general affairs section, as mentioned above, could be evaluated as prompt and appropriate.

After the scandal came to light, the president internally sent out a message stating that it had been committed continuously for many years before the division entered Kyocera group, and was brought to light by an inside denunciation by a small number of courageous employees.

[Analysis]

As described above, after having clearly recognized the inappropriate conduct, the employee X was able to consult with and report on it without hesitation to his superiors and managers of the general affairs section. Why?

First of all, the employee X had a high sense of ethics as an engineer. According to the employee X, when he was a university student, ethics as an engineer were hammered into his head.

The employee X trusted his immediate superior, section manager, to listen to him sincerely. Moreover, the employee X thought that he could get along somehow because the atmosphere of the head office was different from that of the Chemical Materials Division. He expected that Kyocera headquarters (or management) would fairly treat his accusation against the inappropriate conduct. In addition, if his first efforts were in vain, he was prepared to make use of the internal reporting system or find other means (with a strong will of not neglecting the matter).

The young employee X was not familiar with the organizational culture of the Chemical Materials Division. In other words, he was not immersed in the (partially rampant) "common sense" of the division. Therefore, the employee X could take actions following his firm belief

of "don't do what you shouldn't do" without taking account of any reasons and/or circumstances that justify omission, such as excuses like "my boss has acquiesced in the matter," "it is too late now to reveal such long-lasting misconducting practice" or "disclosure would have a significant negative impact on business."

It is said that organizational or social reforms require a "young man," "fool" or "outsider." The employee X was a "young man" and "outsider" of the Chemical Materials Division.

II Causal analysis

Through a series of investigations, the Committee determined the causes of the inappropriate conduct that have continued for many years to remain undetected.

1. Lack of ethics and compliance awareness regarding quality assurance

In the Chemical Materials Division, managers and employees in the Technical Department in charge of the UL certification and UL's FUS related processes continued inappropriate conduct over a long period of time, while being aware of the same and without any efforts to correct them, in such a way that they prepared and used internal instructions for manipulation at each workplace, and submitted false samples for UL's FUS service. These actions deceive not only the UL but also customers neglecting quality assurance. Despite the fact that many executives of Toshiba Chemical, Kyocera Chemical and the Chemical Materials Division were aware of or could easily recognize the inappropriate conduct, they didn't take actions to investigate or correct the inappropriate conduct.

Regarding the misuse of suffixes, there are several views that a possible cause of such misuse was that they wanted to avoid the cost for obtaining the suffixes. In the division, cost outweighed compliance.

There was no doubt that this attitude stemming from the lack of ethics and compliance awareness regarding quality assurance was thriving among the executives and employees in the division. As a result, these UL related inappropriate conduct continued for more than 30 years until they were revealed by a younger employee in the fall of 2020.

2. Problems in dealing with technical issues

(1) Acquiring and maintaining certification without giving due consideration to the process capability of their products

One of the problems in dealing with technical issues is their acquiring and maintaining

of the UL certification without giving due consideration to the process capability[14] of their products. For example, in the case of UL94, the flame retardancy of mass-produced products was not sufficiently ensured, and there was a possibility that the samples of mass-produced products would be rejected in the flammability test. Then, before FUS, the samples were replaced with special samples with higher flame retardancy without giving due consideration. We can say that this happened because they acquired the certification even though the actual fire retardancy (process capability) of their mass-produced products did not satisfy the standard.

(2) Lack of data-driven scientific analysis and efforts to make improvements

As voluntary measures apart from FUS, the division had not followed the following PDCA cycle: (1) periodically perform flammability tests to quantitatively confirm and judge the degree of compliance with the UL standards; (2) assess the actual quality (flame retardancy) of their products based on the test results; and (3) if the quality is inadequate, consider and implement quality improvements (flame retardancy). As a result, no attempt had been made to take technical actions to correct the quality such as flame retardancy, or actions to systematically and fundamentally correct the inappropriate conduct.

(3) Pandering to customers

The next problem that led to committing the inappropriate conduct is pandering to the demands of customers which had been mainly seen in the Technical Department. In other words, the Technical Department, which was responsible for the design and development of products of the Chemical Materials Division, did not have deep communication to understand the customers' true requirements for quality. Here is an example in the case of UL94. When filling an application form, it is required to specify the thickness (t) of the test pieces to be certified, and in many cases, when the encapsulant was as thin as 0.8 mm, it was difficult to satisfy the flame retardancy requirement with the process capability of the Company. Nevertheless, it seems that the Chemical Materials Division rarely checked with the customer the technical necessity of V-0 at this thickness or the tolerance of the thickness. Furthermore, when customizing products based on customer requests, it seems that no discussions and negotiations were held with customers to explain to them about the need

[14] "Process capability" means quality-related capabilities and refers to the variability in quality characteristics values of products produced in a stable process. Process capability indexes (Cp, Cpk) are used to measure to what extent the process is constantly capable of satisfying the product specifications agreed with the customer (long-term capability, probability that no defects occur). The higher the process capability, the higher the process capability indexes.

for a new certification in accordance with UL rules and the necessity of UL certification.

In this way, the Chemical Materials Division pandered to customers to superficially satisfy their requests instead of telling them that it was impossible to satisfy their requests. As a result, evasion of UL rules was rampant. In a word, the division postponed problems that they should have solved at the beginning, and as a result had no choice but to keep perpetrating inappropriate conduct at FUS.

(4) Lack of proper understanding, knowledge, and awareness of the UL certification program

The division did not have clear rules for UL certification, and in-house education on the UL certification system and FUS was insufficient. They had no in-house experts who had enough technical knowledge to lead the Technical Department and the Quality Assurance Department regarding the UL. To make things worse, no positive measures were taken to make up for the lack of knowledge and know-how related to the UL certification, such as seeking help from the UL and other external expert organizations, trying to understand trends of other companies in the same industry and to collect information about them, and engage in technical exchange with them.

As a result, the basic principle of "one formulation per grade" was not correctly understood or put into practice, and inappropriate responses continued for many years due to distortion and misunderstandings of the UL rules, including indiscriminate use of suffixes.

3. Difficulty in radically solving problems that have been accumulated and become serious

As mentioned above, various products (raw materials) had been subject to the inappropriate conduct, including encapsulants, resins, phenolic molding materials, premix molding materials and insulating varnishes. Furthermore, the sales channels and end users of these products were diverse, and the Chemical Materials Division was not aware of the entire actual situation. In addition to this situation, the senior management had overlooked inappropriate conduct. Due to the inaction of senior management, the number of inappropriate registered grades increased over time, and it got more difficult to radically correct the situation. Concerning this point, an employee in charge stated, "We had shared an attitude and information regarding production, based on the idea that we could put aside conventional products with which we could do nothing (registered grades which had been subject to inappropriate conduct since before), and that, for products we would launch, we should make sure that they were inflammable, certified with ID and compatible to UL." Like

this, each person in charge was just working to obtain proper certification starting from the design and development of new products, and had no idea about trying to fundamentally solve problems.

4. Problem with organizational climate (closed society and cover-up mentality)

Although the inappropriate conduct were committed by related departments within a closed division, a relatively large number of officers and employees, including those of Toshiba Chemical and Kyocera Chemical, were aware of such inappropriate conduct since the division involved various products and had continued to commit such conduct over a long period of time. However, it does not appear officers who were aware of the inappropriate conduct worked to solve the problem as part of their own duties, and it is obvious that managers who knew the situation in detail also tolerated the inappropriate conduct.

A significant factor that led to such inappropriate conduct is the closed organizational climate (closed society) and cover-up mentality of the division. As indicated in the questionnaire, the following problems are also considered to have been caused by this organizational climate: (1) irresponsible attitude of averting one's gaze from solutions to fundamental problems, such as "peace-at-any-price," "to turn a blind eye," and "to leave all the work to one's subordinate;" (2) "to stop thinking," "to be dependent on others," which means inferring and swallowing instructions and guidance from superiors and seniors without trying to understand the essence of them and then engaging in wrongdoing without guilt; and (3) "silo management system," "dependence on particular employees."

The division also did not give opportunities to openly exchange opinions regarding issues or take them seriously. An employee of the division (who is from Kyocera Chemical) responded to the questionnaire as follows.

> One day, when a mid-level employee asked a manager a question about the way to proceed a work at a meeting, the manager, being unable to answer the question properly, shouted at the questioner saying, "Can you decide?" I think this is due to a climate prevailing in the former Toshiba Chemical under which employees (subordinates) were intimidated, and they couldn't disobey orders from their bosses.

As this case shows, even when site workers in charge, especially younger employees, appealed to the necessity of correcting the inappropriate conduct and other problems in the workplace, the middle-ranked managers squashed such voices while inferring the conservative mentality of their superiors. Sometimes, those who expressed such opinions were even reprimanded. Under such circumstances, "young employees" and "outsiders," like the

employee X, were easily eliminated. Such attitude of superiors caused employees in the division to become reconciled and think like, “I will be scolded if I say it,” “No matter what you say, they won't deal with it,” “That's how things are here.” As a result, “a work environment where no one can speak out” was fostered, and the inappropriate conduct were continuously committed.

In addition, the division did not have a cross-sectional team (or project) with which the Technical Department, Manufacturing Department and Quality Assurance Department could promote the development of innovative products that could lead the industry. Many operations were carried out in a closed manner in each department, and personnel exchanges and transfers between the division and other divisions were not actively performed. As a result, the precedent was always followed and the closed culture with a dependence on individuals became stronger. Furthermore, because the operations of each department were not “visualized” and each operation was dependent on individual employees, inappropriate conduct were not pointed out by other departments even if existed.

5. Underlying and indirect causes of the inappropriate conduct

The following points can be cited as the underlying and indirect causes of the inappropriate conduct.

(1) Motivation (pressure)

Officers and employees who had been involved in FUS in Toshiba Chemical, Kyocera Chemical, and the Chemical Materials Division shared the experience and recognition that if their products failed to pass the FUS and the certification was rescinded, it would cause a lot of trouble, such as dealing with customers. This was the motive (pressure) for the inappropriate conduct.

In addition, it is also obvious that the cost management, which does not sufficiently take into account the business necessity, and the misguided sense of cost of trying to cut registration costs as much as possible, also caused them to perpetrate the inappropriate conduct.

(2) Opportunities for inappropriate conduct at FUS

All of the products subject to the inappropriate conduct are raw materials, and before the flammability test, they need to undergo forming process. Therefore, when the UL inspectors visits the plant, they just designate the mass-produced products in the plant and do not take the mass-produced products with them when they leave the plant. That means, there was an opportunity for the designated mass-produced products to be replaced with

special samples before molded articles were submitted to UL, and this opportunity was exploited.

(3) Self-justification

Some officers and employees in charge justified themselves by saying that there had been no accidents or claims in the market, that it was hard to imagine a case in which a flame directly came into contact with each product when considering the application, and that failure to meet the flame retardancy standard would not lead to any problem. Others tried to justify the curing time of more than 100 hours, which was far from the actual use by the customer, while citing the fact that there was no restriction on the curing time of the test pieces in obtaining UL certification.

Furthermore, some stated that they had no choice but to submit samples that had been kept at the time of the acquisition of the certification or samples of the same composition produced in the trial, and pointed out the following reasons therefor: (1) each product uses a large number of raw materials, but in some cases they deviate from the ID (IR, TGA) which has originally been registered due to circumstances on the part of the raw material manufacturer, etc., and judged as rejected, but the cause of the deviation cannot be identified; and (2) each product is an organic substance, and the ID of the product may deviate due to aging of raw materials even if the composition of the product does not change (= They do not pass the FUS). It is true that the circumstances of (1) and (2) are issues difficult to deal with in maintaining the UL certification, and it seems that all of the employees who have taken charge so far were struggling to deal with them. However, it is obvious that this does not mean that they are allowed to engage in inappropriate conduct such as deceiving the UL and customers. The Chemical Materials Division should have addressed the issues as an organization, such as by setting up a cross-sectional team to consider how to deal with technical issues, carrying out communications with the UL to find solutions, or by reviewing the acquisition of the UL certification itself if it was impossible to satisfy the standards.

6. Malfunction of monitoring system for quality compliance and risk

The Quality Assurance Department is originally supposed to be independent from the Technical Department and Manufacturing Department and to ensure and assure the quality of products to be provided to customers. Not only carrying out operations such as inspections, they must suspend shipments when adequate product quality is not satisfied.

Actually, however, the Technical Department was in charge of dealing with FUS, and the Quality Assurance Department had little involvement in the series of processes. The process

to deal with FUS was outside the scope of monitoring by the Quality Assurance Department. To make matters worse, even after technical staff who had been involved in the inappropriate conduct was reassigned to the Quality Assurance Department, they ignored the inappropriate conduct; the monitoring system over the UL certification was not functioning. Like this, being carried out under the leadership of the Technical Department, the process to deal with FUS was a black box, in which inappropriate conduct were committed freely.

Similarly, the auditing and monitoring system of the headquarter departments (Quality Assurance Department of the CMSC Group and the CS Promotion Division of the headquarters) over the process to deal with UL certification were quite inadequate. Unlike system certification, such as the ISO 9001 follow-up, FUS of UL certification is product certification, the CMSC Group and the headquarters departments should have conducted product audits to check if the quality of the product satisfied the standard on their own. However, no such audits were performed and they failed to find the inappropriate conduct of the Chemical Materials Division.

7. Problems with PMI

In 2002 Kyocera acquired Toshiba Chemical Company, but due diligence (hereinafter referred to as "DD") at the time of the acquisition apparently failed to detect the inappropriate conduct[15]. It seems that it was difficult to discover the inappropriate conduct, which had been cunningly concealed among the persons in charge, through DD because time and resources for it were limited. Rather, the point is that Kyocera had been unable to detect or stop the inappropriate conduct over about 20 years since it acquired Toshiba Chemical in 2002.

Furthermore, many officers and employees, including former employees of Toshiba Chemical and Kyocera Chemical, stated that the corporate culture (cover-up mentality and closed society) of the Chemical Materials Division described above was far removed from the Kyocera Philosophy. Their allowing such organizational climate to exist for many years must also have been a problem.

Kyocera is a global company with a high degree of expertise in the inorganic chemistry of ceramics, but on the other hand, they lacked knowledge and know-how on organic chemistry, which has been handled by the Chemical Materials Division. Although such issues are frequently seen in many M&A of other companies, it is undeniable that due to this underlying cause, their governance over Kyocera Chemical, a group company, was insufficient. When Kyocera Chemical was merged into Kyocera in April 2016, the goal stated at that time was to

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[15] The Committee tried to obtain the DD records of that time, but the related documents had already been disposed of, and we could not examine the DD records.

develop a sense of unity as a group and to establish a system that enables business expansion by making the Kyocera Philosophy and Amoeba Management permeate throughout the group. We have to say that they failed to achieve the goal.

Since the acquisition, a considerable number of personnel have been reassigned from Kyocera Corporation to the Kyocera Chemical and the Chemical Materials Division. Even so, few managerial personnel were dispatched to the Technical Department, and the prior organization and business methods were maintained in the Technical Department. In this way, the Technical Department of the Chemical Materials Division seems to have been "a black box," although it was positioned under Kyocera Corporation.

The situation described above is nothing but a problem caused by insufficient post-merger integration (integration process after M&A), which is considered to be important in M&A.

8. Problems with the internal reporting system

Kyocera has established the "Employee Consultation Hot-Line Center" as the contact point for receiving reports and consultations regarding acts that are or may be in violation of the "Kyocera Employee's Action Guideline" or laws and regulations. However, the investigation by the Committee shows that no officers or employees, apart from employee X, had tried to make consultations or reports to the "Employee Consultation Hot-Line Center," and that the "Employee Consultation Hot-Line Center" had not functioned as a diversion for those involved in the inappropriate conduct; they did not seem to be worried that the inappropriate conduct might be revealed when a consultation or report was made to the Center.

On the other hand, in the questionnaires and interviews conducted by the Committee, many significant matters and opinions were pointed out regarding product quality, in addition to the inappropriate conduct. That shows quite a few officers and employees in the Chemical Materials Division had faced compliance-related problems and suffered from them. The "Employee Consultation Hot-Line Center" had failed to pick up such voices.

These results are largely attributable to the closed corporate culture of the Chemical Materials Division, but in any case, there is room for improvement in Kyocera's internal reporting system.

9. Sloppy data and document management

For products subject to the inappropriate conduct, most of the formulation sheets of the items which were developed and certified and registered for the first time were not stored as (systematic) data. Therefore, it is impossible to determine whether the formulation of a current mass-produced product is the same as that at the time of certification, and a record of changes (improvements) in the formulation after the certification is also unknown. In this

way, many of the data and documents related to products were stored and managed by a limited number of employees or groups; that is, the procedure was overly "dependent on individuals" and became a "black box." Such sloppy management of data and documents had made it difficult to discover the inappropriate conduct, and as a result, the inappropriate conduct were continuously committed for many years.

Chapter 4 Recommendations for prevention of reoccurrence

I Introduction

Based on the above mentioned cause analysis, the Committee recommends the following measures to prevent reoccurrence. Although Kyocera has already implemented or is considering various measures to prevent the reoccurrence of similar conduct, we expect that it will consider and formulate more effective reoccurrence prevention measures based on the recommendations herein.

II Reoccurrence prevention measures

1. Fostering and reinforcing a sense of ethics and compliance awareness regarding quality assurance

As mentioned above, the Chemical Materials Division was found to lack a sense of ethics and compliance awareness regarding quality assurance.

In order to improve this situation, it is essential for management to exercise strong leadership and fulfill their commitment to reform the mindset of officers and employees. In correcting the inappropriate conduct, they are expected to face challenges such as a decrease in sales and increase in costs, as well as problems difficult to solve that have accumulated and become severe. Even so, management should be unwavering in constantly supporting the appropriate decisions made by the Chemical Materials Division.

In addition, they should figure out some education methods to encourage individuals in the division to think of the importance of quality assurance as "their own matter" and to make the Kyocera Philosophy permeate, such as through holding town hall meetings on this issue and on-site discussions where participants can express their honest opinions.

2. Addressing problems in dealing with technical issues

(1) Measures to identify and improve process capabilities

In order to ensure and improve quality, which is the basis of manufacturing, instead of being swayed by the result of FUS, what they need to do is to record the results of flammability tests as quantitative data; to understand to what extent the actual capability

deviates from the standards such as V-0 from process capability indexes; to carry out scientific analysis and improvement based on the data, that is, to grasp and calculate the probability of being rejected; and to make efforts to improve the process capability indexes (Cp, Cpk). Furthermore, it is desirable to establish in-house standards that are stricter than the UL standards and to establish a management system that ensures process capability.

Such a management method has long been common sense among many manufacturing companies that promote quality-first management. The division should also implement scientific management and improvement based on such quantitative data.

(2) Improving the level of responsibility towards customers

The inappropriate conduct undermined customers' trust in the UL certification Kyocera had obtained and led to the withdrawal of the UL certification, which caused significant inconvenience to customers and stakeholders in the supply chain (end users). Officers and employees of Kyocera should bear in mind that this is the result of their pandering to customer needs.

With that in mind, they should make up their mind to stop pandering to customer needs related to product quality the company guarantees and superficial responses to them; that is, to reject customer demands that they cannot meet even if they fail to receive the order by doing so.

Furthermore, in order to improve their dealing with customers, they should thoroughly discuss the background and necessity of customer requests (quality specifications demanded by customers) with customers, and then adopt specifications which both parties can technically agree on. Their response to customers needs a renovation. They should make use of this opportunity to narrow down the UL certified products (=select items which really need to be UL certified) after consultation with customers.

(3) Obtaining proper understanding, knowledge, and awareness of the UL certification program

In order to obtain proper understanding, knowledge, and awareness of the UL certification system, it is necessary to first prepare clear in-house rules and manuals regarding the UL certification, and establish an in-house education system.

The Committee also conducted a verification of the training provided by UL which officers and employees of the Division received in response to the inappropriate conduct, and held a question-and-answer session and an opinion exchange with an external expert organization (Chemitox, Inc.), and found they were extremely meaningful. In the future, the Division should stay in appropriate communication with external expert organizations

such as the UL and Chemitox, Inc. to supplement and update its knowledge and know-how on the UL certification.

3. Improvement of organizational culture

As mentioned earlier, a closed organizational culture (closed society) and a cover-up mentality had been fostered in the division, and under such prevailing atmosphere, even if subordinates gave correct opinions, they would not be heard, or rather would get a reprimand, and therefore, "nobody said anything."

In order to fundamentally improve the organizational climate that has developed over many years, it is essential to break with the past and dismantle and reorganize the "closed society." Concretely, the following measures are considered to be necessary.

(1) Personnel reshuffle

In order to dismantle the "closed society" that remains in the division, decisive measures should be taken to reshuffle the personnel. They need to refresh both the personnel and their mentality by adopting staff from other divisions and external organizations and by promoting personnel exchange among divisions more actively than ever. By doing so they should cause the Kyocera Philosophy to permeate.

(2) Strict punishment of personnel

Until now, it seems that there have been very few cases in which personnel involved in quality-related inappropriate or improper conduct were punished properly. Many officers and employees were involved in or aware of the inappropriate conduct, or they could easily recognize them. In order to break away from the past and to ensure appropriate quality control, it is necessary to strictly and impartially punish such officers and employees.

However, in determining the details of individual disciplinary actions against them, sufficient attention should be paid to ensure that the details are appropriate. The points that should be taken into account are that the inappropriate conduct were the result of accumulated inappropriate conduct over a long period of time; that it was extremely difficult for one person in charge to resolve and improve the inappropriate conduct on their own; that the inappropriate conduct had been continued as semi-routine in each department; what actions each one should or could have taken in light of their position and responsibility; whether they reported it themselves in the investigation this time; and whether they were cooperative with the investigation, etc.

In addition, it is also very important to ensure fairness in the selection of persons subject to disposition, and sufficient investigation and consideration should be conducted so as not

to "let someone else be the scapegoat" or to let people think that "honesty doesn't pay."

(3) Creating an environment where anybody can express opinions

As mentioned earlier, most of members were not able to express their opinions, thinking "They will not listen to me even if I say what is right to do."

In order to improve such climate, managers of the division should make sure appropriate corrective actions will be taken based on the opinions of field workers; that is, they need to set a model by their own words and deeds. In addition to that, active measures should be taken in future business operations, such as promoting bottom-up decision-making, welcoming and commending those who raise problems in the workplace.

4. Removing underlying and indirect causes of the inappropriate conduct

Of the underlying and indirect causes of the inappropriate conduct, (1) pressure to pass the FUS and misguided sense of cost, and (3) self-justification are considered to be eliminated when measures such as "fostering and reinforcing sense of ethics and compliance awareness regarding quality assurance" and "improvement of organizational culture" are put into practice under the strong leadership of management.

Then, to eliminate (2) opportunities for inappropriate conduct at FUS, a system to have the process to prepare test samples for FUS monitored and checked by a third party should be established.

5. Strengthening monitoring system on the quality compliance and risk

As described above, the process to prepare for FUS was a black box centered on the Technical Department, and was not subject to monitoring. Kyocera should immediately solve problems like this and strengthen the monitoring system for quality compliance from the viewpoint of three-line defense.[16] In particular, it is necessary for the Quality Assurance Department in charge of the Chemical Materials Division to be staffed and empowered to ensure sufficient independence and expertise of it.

6. Review and improvement of PMI

Taking this opportunity, the PMI, including other M&A cases, should be reviewed and

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[16] The three-line defense refers to the concept of implementing integrated risk management as an organization by clarifying the roles and responsibilities in risk management for each of the following three lines: (1) operational divisions (manufacturing, sales and purchasing divisions); (2) administrative divisions (risk management, compliance divisions, etc.); and (3) internal audit division.

improved. When reviewing and improving the PMI, while making use of the know-how, knowledge, and human resources of the division and the company to be acquired, Kyocera should clarify the ideal organizational culture to be sought (workplace where opinions are exchanged freely and vigorously and diversity is respected), make sure that its Philosophy will penetrate, and stay in good communication with each other.

7. Improving and strengthening the internal reporting system

For many years, employees of the division had not attempted to solve the problem by making use of the internal reporting system. This is because the internal reporting system had not been recognized or trusted in the division.

Therefore, Kyocera should implement measures to make the internal reporting system known and trusted more. As measures to create an atmosphere in which employees can feel free to consult and report quality-related inappropriate conduct, there are options like (a) setting up a consultation and reporting desk specializing in quality-related inappropriate conduct, (b) setting up an external contact desk with experts, (c) adding questions about quality-related inappropriate conduct and their concerns about such conduct in regular interviews with employees, and (d) conducting an anonymous questionnaire survey of employees.

8. Establishment of a systematic data and document management system

The actual status of data and document management of the division was too sloppy. As mentioned above, the basic formulation sheet, etc. of products has been lost and is unknown. Such status is a serious problem as a manufacturing company.

It is urgently necessary for the division to establish a data and document management system that does not allow data and documents to be falsified by promoting “visualization” and sharing of data as an organization.

Chapter 5 Conclusion

The inappropriate conduct were caused because those involved, including executives, did not act, stopped thinking and turned a blind eye to problems. As mentioned above, although the inappropriate conduct were brought to light by a courageous young employee, considering the scale and extent of the inappropriate conduct, it was obviously impossible to cover it up and it would eventually be disclosed.

Kyocera will be required to sincerely deal with the customers and end users who it has delivered improper products to, and to formulate and implement effective reoccurrence prevention measures. In addition to that, we also expect them to overcome this challenge as a team under the strong leadership of management (without thinking that this is somebody else's business).

In the questionnaire conducted by the Committee, many officers and employees expressed their sincere remorse and strong determination to carry out their duties properly in the future. Not a few officers and employees were courageous enough to provide valuable opinions and information to the Committee.

These changes in the individuals represent a major step toward a new organizational culture. Management and executives are expected to take seriously these thoughts and changes of officers and employees and to support them positively.

In conclusion, we would like to express our heartfelt respect and gratitude to the many Kyocera personnel (including retirees) who responded sincerely and honestly to the investigation despite their being very busy.

Annex　Contents of the questionnaire responses (excerpt)

This section presents some citations from the questionnaire responses on what directors and employees mainly engaged in as part of the Chemical Materials business, what they think and feel about the cause of this problem, as well as the organizational culture, etc. Please note that in the citation below, with the exception of those that required anonymization, etc. or for obvious typographical errors or omissions, the responses made in the questionnaire have been transcribed as is.

(1)　Regarding the cause of the inappropriate conduct

The following opinions and comments have been raised as the cause of the inappropriate conduct.

1. I believe it was getting the juniors involved by combining the instructions with various reasons (excuses), when teaching the junior staffs. (- omitted -) The basic cause is the lack of attitude and conviction to “sever the past with courage”. I am really sorry.
2. Because a person in charge for UL exists as a workplace committee member, it felt like a side job and not the main-stream business, and operations were completed inside a small circle of people. Response to UL had all been left to the employee in charge for UL, restricting the sharing of information inside the Technical Department (Information other than the product you are in charge of was not available).
3. I was taught how to respond to UL immediately after joining the company. Although I had doubts, there was no one available to consult with and I think there was an environment that gave the illusion of things being normal, hearing that the same acts were being conducted in other divisions also.
   Regarding encapsulants, the type of products grew to a point where we could not go back, so we just kept on continuing.
   One of the causes was the absence of a person with UL knowledge in the decision-making management layer, and also the absence of rules for checks and approvals or the rules being unknown.
4. Technical Department had to cover the range from product development to customer response, which also included UL response focused this time. With the Technical Department being so busy, I believe it acted as a background for overlooking the problem.
5. I think the cause of the problem was that even if I raised questions to my superior, only evasive answers were given with plausible reasons, such as the action being taken from

the past or not to cause trouble with the customers, as well as being naive about UL.

6. When learning the job from a senior employee, I just thought this was just the ordinary way to do it (did not think of it as a critical matter) and had no doubts on the age-old customs. I think it was difficult to get up and change the system, even if it was recognized as being inappropriate, when the huge amount of time and cost required to correct all the cases that had been accumulated over the ages were considered.
7. When I was responsible for FUS as the person in charge of technology, I used to think that causing inconvenience to the company by my own acts, such as being rejected twice by UL and having the shipment suspended, was an act that should not have been made. I had not understood UL certification very well and did not understand that the acts were inappropriate. There was a strong atmosphere of not to allow any FUS rejection from around 2019.
8. It had been continuously done from the past and the method had been passed down over generations. Frankly speaking, even though there were some doubts, my awareness was that there were methods like this that could be taken. I think one of the factors is the lack of awareness and the lack of procedures and education that made people believe that only the implementing person needed to know about the procedures.
9. Regarding UL, I think the cause of the matter was the absence of person(s) with good knowledge of its rules and regulations, what could be done and what could not be done. This also resulted in the internal rules being ambiguous and it was left to interpret them in a convenient manner.
10. I think one of the causes was that the Sales people were doing as they had been told by customers and freely determining the name of products on their own. (Being forced to use a name similar to a popular product, even though its formulation was not identical.)
11. The loose way of thinking regarding the specifications is a factor. To begin with, UL certification cannot be obtained in time in the area of encapsulants, where its product cycle is short.

    I believe the big issue was the failure to check with the customer whether UL certification was required, or whether flame retardance was really required in the first place.
12. The lack of technical ability is believed to be the cause. Inappropriate acts had been committed to evade being off standard. I think it was continued because no problems emerged.
13. Wasn't there a problem with the management of Toshiba Chemical? (- omitted -) It had been passed down in an erroneous manner but being taught with the manner will

let the person think they are doing the right thing making it difficult to cast doubts. Furthermore, even if there were doubts, wasn't there an environment and pressure in the workplace that did not allow the voicing of such doubts? Correction could have been made at the timing when the company changed hands, but as Kyocera did not have any person that had detailed knowledge of encapsulants, they may have missed becoming aware of the inappropriate responses. If former Toshiba people said that the method is correct, then I think everyone would think that has put an end to the question.

14. At the time, the company was very strict on profitability and was not in an atmosphere to pay out 700 to 800 thousand yen for an UL registration.
15. At the time, I had no doubt the method taught by my superiors and senior colleagues was the only "method". I later learnt that certification acquired by our competitors were acquired with greater thickness, but the company culture of Toshiba was to apply at a value close to their actual value (critical value).
16. Regarding the unreasonable responses that were actually used, I appealed to the seniors in the Technical Management Division "to submit individual registrations to turn matters to normal, from now, late as it is", immediately after being placed in charge, however I was admonished as if I was the "naive person advocating unreal ideals".
17. The thinking that there are no problems since similar acts have been taken by other companies from the past. The easy way of thinking that there are no problems since no accidents have occurred.
18. The lack of firm philosophy. Wishful thinking that did not realize it was an inappropriate act, an ad-hoc response using makeshift measures.
19. I think departments that are difficult to be monitored from the outside tend to shut itself down under these kind of situation, forming a difficult environment for the matter to be readily exposed.
20. I think the sense of awareness had been diluted down by the existence of a UL response manual and I am sure that there must have been many who had considered the acts to be in line with the rules.
21. Executives of Kyocera had been dispatched to Sales, Administration, and Manufacturing from the days of Kyocera Chemical, however, there were almost no dispatch on the technical side (due to lack of personnel who understood organic chemistry in Kyocera?), which stripped the opportunity for the problem to surface.

(2) Recurrence preventive measures

Opinions and comments on measures to prevent recurrence are as follows.

1. I think it is necessary to have such a system (rules) that can prevent inappropriate actions.
   As a mid-level employee, I would like to contribute to developing systems and deepen knowledge so that I can show future employees what is correct.
   We are concerned that the Chemical Materials Division has lost credibility.
   I hope that this incident can be turned into an opportunity to create an environment where everyone can work proudly, and I will do my best to do so.
2. When preparing UL samples, the quality assurance department must intervene as a checking function to ensure redundancy in checking.
   For the UL's suffixing systems, there is no clear definition for their use. Therefore, UL certification should be obtained for each material one by one.
3. In consideration of corrective actions to be made, I am concerned that the same thing will be repeated in the future without major structural reform of the Chemical Materials Division. Managers from the former Toshiba Chemical should be replaced along a principle of "the right person in the right place," otherwise regular checking systems under the control of other divisions or of the headquarters should be developed.
4. Up until now, decisions made by the former Toshiba Chemical's managers beyond their rights and responsibility have been strongly influencing operations. Without transfer of these persons, it may be difficult to retain young engineers who will lead the next generation and change the corporate culture. The survival of the Chemical Materials Division depends on whether or not it is possible to bring out the potential of young employees who will lead the future of the company.
5. After integration into Kyocera, the technical department has been occupied by the members of the former Toshiba Chemical. I'd like to have Kyocera employees who have been working for Kyocera for long years come to our factory as supervisors so that we can be told about their way of working.
6. I think that strict punishment is needed. I think that an overoptimistic view such as "if your boss orders you to do something wrong, you have no choice but to obey him" and "even if it is revealed, only the boss will be disciplined" is pervasive. We must take decisive actions to eradicate corruption.
7. As a protection against recurrence of this incident, human education is essential. It should be designed with respect to "who teaches," "what should be taught," and "how the result of education should be checked."

Education should be considered such a measure that shall be followed by other recurrence preventive measures such as regular (yearly) meetings where all employees, including new employees, can join so that they all can talk about and raise awareness about recurrence prevention.

8. It is necessary to hold regular hearings to ensure that no inappropriate actions are taken.
9. We should create a workplace environment where they can frankly talk about mistrust and doubts, otherwise we should have a regular survey designed and implemented by outsourcing to hear the voice of our employees.

(3) Organizational culture and workplace environment

Some of the comments on the organizational climate and workplace environment of the Chemical Materials Division are shown below. Note that they also can be considered causes of the inappropriate conduct (see (1) Causes above).

1. I think the awareness of inappropriate behavior was weak. I remember raising questions about the misconduct with my superiors when I first joined the company. But I have now been obeying a saying, "When in Rome, do as the Romans do."
2. When a mid-level employee asked a manager a question about how to proceed with work at a meeting, the manager shouted at the questioner, "Can you decide?" not answering the question properly. I think this is due to a climate prevailing in the former Toshiba Chemical under which employees (subordinates) were intimidated, and they couldn't disobey orders from their bosses.
3. I think there is a climate of ostrichism in the division. This leads to such a working process that a word from a person in power settles the course of action to be followed. There are no discussions for pursuing alternatives or better ways. Opinions from the subordinates, if any, will be blown away by his word. This is like a backroom politics. This climate continued as a heavy cross that all juniors bore.

   I heard that this inappropriate conduct was accused by a young employee. I think it was a very courageous action.
4. The former Toshiba Chemical's long-lasting climate of trying to conjecture the superior's mind, ostrichism and dependence on others caused problems to be left unsolved while the employees faded a sense of involvement, which resulted in their losing consciousness about these problems and postponing the solving of them.

   I think that another reason for allowing this situation to remain not eliminated was that there was no accident that happened in the market so that no customer trouble or claim occurred.

5. I feel that the main reason is that we couldn't create an atmosphere or a place where people who are really in trouble can talk and consult each other beyond the barriers of superiors and organization. I have to consider this seriously so that it doesn't happen in my workplace.

(4) Others

Some other comments are shown below. The committee hopes that all managing members of Kyocera, including the top management, will give full consideration to this matter, sincerely receive their anger and anxiety and desire for correction, and take them into consideration in expectation of correct working environment.

1. With this as a start, I strongly hope to do the right job. I think there were times when we were working by setting unreasonable standards to meet strong demands from customers. However, I believe that by respecting compliance and morals that are consistent with the present norm, we can create a system that can provide better products to the market.
2. We shall never show samples that are different from actual ones in any of our marketing activities. It is an act of betraying our fellow employees at Kyocera, and above all, the fact that we have deceived our customers for many years gave rise to completely losing public confidence and causing them to distrust us.
3. I feel ashamed of myself for not being able to notice the inappropriate conduct during 20 years of service in this company. I think that the long continuance of the inappropriate conduct is attributable to such the situation that allowed manipulation to be made within a limited number of specific departments. ...I am grateful to him for raising his voice against the rampancy of the inappropriate conduct.
4. I think most of the employees of the administrative departments and other indirect departments don't know about the inappropriate conduct. I'm very ashamed and sorry for my career at the former Toshiba Chemical. It is very painful to me to talk about my career. I want to ask the current and retired employees who had been involved in the inappropriate activities how they feel about us, employees of the former Toshiba Chemical who had not been involved in the inappropriate activities. I want them to apologize to us, employees of the former Toshiba Chemical who had not been involved in the scandal. I don't want them to think that investigations by the Special Investigation Committee mean atonement for their inappropriate conduct.

   It is important to apologize to the outside, but it was not only the customers who were betrayed but also us. I want them to think about how much we, employees of the former Toshiba Chemical, have had bad and sad experiences due to this scandal.

5. Taking this opportunity, it is important for everyone to have a sense of involvement, standards for judgment for distinguishing good and evil, and courage to change.

Corrective Action and Measures to Prevent Recurrence against Inappropriate Conduct regarding Kyocera's Chemical Products

May 14, 2021(Reiwa 3)

Kyocera Corporation

We extend deep apologies to customers and all who are concerned by the inconvenience brought by our inappropriate conduct regarding UL certification for our chemical products. We take seriously causal analysis and recommendations for prevention of reoccurrence indicated in the Investigation Report of Special Investigation Committee. We make a commitment to faithfully implement the corrective actions and measures for prevention of reoccurrence described in this report, and we will work hard to restore the trust of customers and stakeholders.

We appreciate understanding and cooperation of customers and stakeholders.

H. Tanimoto

Hideo Tanimoto
President & Representative Director
Kyocera Corporation

May 14, 2021

Prepared by:
Corporate Ceramic Materials Semiconductor Components Group
Ceramic Materials Semiconductor Components QA Division
Chemical Materials Division
Corporate Legal and Intellectual Property Group
Global Compliance Division
Corporate Management Promotion Group
CS Promotion Division (headquarters quality assurance division)

Table of Contents

I. Fostering and reinforcing a sense of ethics and compliance awareness regarding quality assurance

1. Message from top management to employees to promote awareness-raising (quality-oriented management)

As a company, Kyocera is determined to change employees' perception of the company and work, such as the lack of ethics and compliance awareness, which were the causes of this case. The top management of the company is strongly aware of how necessary that is.

After the company became aware of this case, top management announced to all employees the following:

"Kyocera considers this incident a serious matter. Therefore, Kyocera must be accountable to our customers and establish measures to prevent the reoccurrence in order to regain their trust. Kyocera will reinforce compliance management so as not to let anything like this happen again in any part of our business." (President)

"When finding out about inappropriate practices or trouble, especially if it has been done for a long time, it is easier to yield to people around you and pretend there is nothing wrong than to address the matter. However, in such situation, I would like you to really think about whether it is right or not, overcome your weakness and have the courage to say what is right." "Our business embodies profit pursued fairly by conducting business activities appropriately, and contributing to the society. I would like you to carry on with your daily tasks with that in your mind."(Chairman)

Kyocera's top management will continue delivering strong messages that ask employees to do the right thing.

2. Thorough implementation of corrective action led by top management

As mentioned below, Kyocera will implement corrective action such as reviewing the organizational structure, roles and responsibility of the chemical materials business, and support and audit by headquarters. The top management will take the initiative in carrying out detailed follow-up measures, such as requesting reports on a regular basis until the implementation of corrective action for the UL issues is firmly established.

3. Providing training on ethics and compliance for manufacturing, sales, technology, development, and quality assurance departments

The Global Compliance Division of the Corporate Legal & IP Group will take the initiative in implementing "Ethics and Compliance Training" for all sales, technology, development, and quality assurance employees in the Chemical Business, as well as executive employees in manufacturing and back office departments, to ensure the improved awareness and the

prevention of reoccurrence.

II. Response to technical issues

1. Measures to identify and improve process capabilities

(1)As to the technical problems of the Chemical Materials Division, the Special Investigation Committee pointed out the acquisition and maintenance of the UL certification without consideration of the actual abilities (process capabilities) of the products. Previously at the technical department, quantitative evaluation, such as confirmation of margin at the time of acquiring the UL certification designated by customers, was insufficient.

From now on, in order to oblige engineers in charge to conduct evaluations on a regular basis and make sure applications for UL certification are applied after the technical department has objectively identified the process capabilities of products, Kyocera will amend and implement the internal rules.

(2)In the past, the Chemical QA Department, which is in charge of the Chemical Materials Division, was not involved in the UL certification, and therefore was not able to identify the process capabilities of products. From now on, Kyocera will strengthen the authority of the Chemical QA Department and have the department regularly evaluate products to identify process capabilities. Kyocera will also give authority to the department to instruct the Technical Department of the Chemical Materials Division to improve and reconsider the grade of the UL certification when the margin in the quality standard is proved to be insufficient. Through these corrective actions, Kyocera will establish a system to manage the UL certification appropriately in order to eliminate opportunities for inappropriate conduct.

2. Obtaining proper understanding, knowledge, and awareness of the UL certification program

(1) Taking a special seminar on UL certification

The Special Investigation Committee pointed out that a lack of understanding, knowledge, and awareness of the UL certification program by the Chemical Materials Division is one of the causes of this issue.

For example, the division did not understand the principle of the UL certification: "one formulation per grade." When a new item was launched, a new registration of UL certification was required. However, when the IR chart did not indicate any change because the formulation was similar to that of a registered product, the division handled the product as a suffixed item of the aforementioned registered product. In addition, the

division did not register a new grade because there was no change in the IR chart, although a minor change in the formulation was necessary even in the case of modification of existing products. These caused "multiple formulations per grade," and the number of inappropriate items increased.

Therefore, on March 4, 2021, Kyocera had UL Japan, Inc. deliver a special seminar on UL certification. From three domestic plants and two overseas plants in relation to chemical material business that require UL certification, 50 employees from the technical, development, and quality assurance departments participated in the seminar. From now on, Kyocera will strive to establish a training system and strengthen the organization in order to ensure appropriate compliance with the UL certification program, and learn the latest information related thereto.

(2) Establishment of a department in charge of collecting information on UL standards

Kyocera will newly establish the Chemical Quality Technical Section in the Chemical QA Department and make it the section's mission to collect information and conduct in-house training as to UL standards. The Chemical Quality Technical Section will collect the latest information on UL standards and deepen its knowledge by participating in UL-related seminars and external study groups. The section will also let the relevant departments of the Chemical Materials Division know the information, and provide UL training on a regular basis in order to ensure thorough understanding on the matter. In addition, the section will create databases of the latest information and standards of UL in order to make appropriate decisions based on adequate awareness, and make efforts to prevent reoccurrence of inappropriate conduct regarding the UL standards.

(3) Formulation of internal rules, procedures, and guidelines related to UL certification

At design reviews conducted in the past, the rules and standards required for UL registration were ambiguous. Design review consists of three stages: DR-S (design review at the time of material trial), DR-T (design review at the time of completion of material design), and DR-U (design review at the time of mass production). In the past, although review of UL certification has been conducted in the DR-S, in the DR-T and the DR-U, which are conducted in case of improvement of mass production items, review of UL certification had not been conducted. Therefore, Kyocera added review of UL certification to the checklist of design management rules, and specified the ID data and flammability test results as required data.

In addition, Kyocera will establish rules regarding [1] how to prepare test pieces for flammability tests and [2] conditions for flammability tests conducted internally in order

to ensure that UL certification is properly registered.
Kyocera will also formulate relevant standards based on the Underwriters Laboratories Certification Management Rule as well as rules that enable the person in charge to easily understand and carry out reliable operations.

(4) Thorough transmission of knowledge, rules, procedures, and guidelines related to UL certification

[1] Kyocera will incorporate training regarding UL certification into the education and training rules of the Chemical Materials Division. The Chemical Quality Technical Section of the Chemical QA Department will continue regular training regarding UL certification throughout the Chemical Materials Division, including UL seminars.

[2]For the employees in charge of engineering design in the Technical Department of the Chemical Materials Division, Kyocera will add UL standards and UL certification program to the list of expertise for certification work. In in order to maintain knowledge and improve the level of proficiency, Kyocera will manage each employee's competency.

3. Improving the level of responsibility towards customers

(1) Clarification of necessity confirmation of external certifications such as UL

Previously at the sales department, it had not been clearly confirmed whether or not external certifications such as UL certification are required at the time of preparation of quotations.
Therefore, Kyocera has made it a rule that sales personnel will confirm the necessity of external certification such as UL certification at the time of preparation of quotations. Although Kyocera will do its best to cater to customers' requests, if Kyocera fails to do so, Kyocera will handle the matter appropriately, for example, by not accepting certain orders.

(2) Training on UL certification and item name setting rules

In the past, rules regarding UL certification and item names were ambiguous. Therefore, when a customer requested to use the same item name for a product with a different formulation from UL certified products, the request was easily accepted without any explanation of the problem, resulting in inappropriate responses in some cases.
Therefore, the Chemical Materials Division has established new rules on UL certification and item names (e.g. how to name epoxy molding materials). Based on these rules, Kyocera will clarify the criteria to judge which of the following is appropriate: newly applying for certification or to adding the item to an existing registration.

III. Strengthening the monitoring system on quality compliance and risk

1. Review of company-wide organizational structure, roles, and responsibilities

To address UL issues, Kyocera will reconfirm the functions of the following forts at four levels and review their respective responsibilities.

The "first fort" refers to the Chemical Materials Division. This division is responsible for carrying out quality control activities according to specifications in accordance with procedures. In response to the problem this time, Kyocera will review whether the system for complying with the specifications and procedures was sufficient to prevent errors.

The "second fort" is the SC Ceramic Materials QA Division of the Corporate Ceramic Materials Semiconductor Components Group, which supervises the Chemical Materials Division. The SC Ceramic Materials QA Division is independent from the Chemical Materials Division, and is responsible for confirming that effective quality assurance activities are being implemented.

To address the problem this time, the SC Ceramic Materials QA Division will review the inspection and monitoring activities to determine whether the Chemical Materials Division was prepared to obtain the necessary UL expertise, and whether specifications and procedures based on that expertise were properly established and implemented.

The "third fort" is the quality assurance division of the Headquarters (CS Promotion Division). This division is responsible for providing guidance based on expertise in quality management from a completely independent standpoint from the business divisions. To address the problem this time, the CS Promotion Division will review the auditing system at the SC Ceramic Materials QA Division of the Corporate Ceramic Materials Semiconductor Components Group from a specialist perspective to determine whether the auditing system at the second fort was functioning properly.

The "fourth fort" is a completely independent division (Corporate Global Audit Division). This division conducts audits with complete independence, from the viewpoint of internal control, without being influenced by business systems or customs in specialized fields.

2. Review of the Chemical Materials Division's organizational structure, workflow, and rules regarding the UL certification (first fort)

(1) Review of the organizational structure

In the Chemical Materials Division, only the technical department handled UL certification in the past, and the quality assurance department was not involved until this problem was revealed. Therefore, the Chemical QA Department, which is in charge of the Chemical Materials Division, will be actively involved in preventing the reoccurrence of

the problem.

[1]The quality assurance sections in Koriyama, Kawasaki, and Moka will be responsible for approval action in UL certification and FUS response (implemented on April 1, 2021). Each quality assurance section will check and approve the appropriateness of UL certification and FUS response processes based on internal verification results and records, etc., before making an application to UL and sending FUS samples to UL.

Regarding oversea plants namely Kyocera (Wuxi) Electronic Materials Co., Ltd. and Kyocera Asia Pacific Pte. Ltd., in-house flammability tests, etc. are conducted in Japan. Therefore, as to samples for UL certification and stored sample for FUS, the quality assurance sections will send resins of Kyocera (Wuxi) Electronic Materials Co., Ltd. to Kawasaki, premix molding materials of Kyocera (Wuxi) Electronic Materials Co., Ltd. to Moka, and encapsulant of Kyocera Asia Pacific Pte. Ltd. to Koriyama.

For the oversea plants, similar to the domestic plants, the quality assurance sections of Koriyama, Kawasaki and Moka will check and approve the appropriateness of UL certification and FUS response processes, apply for UL certification, send FUS samples to UL, and take additional steps if necessary.

[2]The SC Ceramic Materials QA Division newly established the Chemical Quality Technical Section in order to confirm whether the quality assurance sections in Koriyama, Kawasaki, and Moka comply with rules regarding products and certification organization such as UL (implemented on April 1, 2021).

(2) Review of workflow and rules regarding UL certification

Although the Chemical Materials Division has a UL certification workflow, its operation was inadequate, and there was little awareness of this issue outside the technical department. Therefore, Kyocera will perform a review as follows.

[1] Based on (1) [1] above, Kyocera has newly established the "Underwriters Laboratories Certification Management Rule." This rule stipulates procedures for making applications for new registration of UL certification and for ensuring FUS response.

For new registration applications, the quality assurance sections will attend to major work such as new sample preparation and in-house flammability tests, or entrust part of the flammability tests to a third-party organization (e.g. CHEMITOX, Inc.) to confirm the validity. Through these procedures, Kyocera will prevent inappropriate samples from being sent to UL.

For FUS, in the past, the technical department compounded materials and prepared test

pieces independently after UL picked out certain items. From now on, this compounding process will be eliminated and samples stored in the quality assurance sections at the time of shipment of products to customers will be used to prepare the test pieces. In addition, the quality assurance sections will attend test piece preparation and in-house flammability tests, or entrust part of the flammability tests to a third-party organization (e.g. CHEMITOX, Inc.) to confirm the validity of the in-house evaluation.

[2] In addition, Kyocera has added new UL-compliant troubleshooting procedures to the abnormality process rules regarding measures to be taken when products that have applied for UL certification are rejected.

When applying for a new registration, if a test piece fails to pass an in-house flammability test, the cause of the failure will be analyzed so that the employee in charge will not replace the test piece with another one at his/her own discretion.

If there is a problem with product specifications, Kyocera will consult with the customer and prepare test pieces with different specifications. If the test pieces have been made incorrectly, they will be made again. In either case, test pieces will be submitted to UL after they pass the in-house flammability test that is conducted again. It is mandatory to obtain approval for these procedures from the quality assurance sections.

When responding to FUS, if a test piece specified for FUS fails to pass the in-house flammability test, the cause of the failure will be analyzed so that the employee in charge will not replace the test piece with another one. If there is a mistake in the preparation of the test piece, it will be made again and the in-house flammability test will be conducted again. If the cause is unknown, Kyocera will consult with UL. In the case of changing product specifications, it will be handled as a new registration. In either case, the in-house flammability test must be conducted and the test piece will be submitted to UL after passing the test. It is mandatory to obtain approval for these procedures from the quality assurance sections.

3. Proactive involvement of the SC Ceramic Materials QA Division in Corporate Ceramic Materials Semiconductor Components Group (second fort)

(1) Review of quality system audits

The Corporate Ceramic Materials Semiconductor Components Group has the following departments: (a) the Chemical QA Department, which is in charge of the Chemical Materials Division; and (b) the Quality Assurance Promotion Department, which serves as a common department related to quality within the Group. (a) The Chemical QA Department has conducted regular internal audits of the maintenance and management

of the quality management system in the Chemical Materials Division. In particular, the department has verified compliance with the rules and their effectiveness, focusing on the operation of troubleshooting and change control for manufacturing processes and products. Regarding UL certification, the department only checked whether the product had obtained UL certification in response to customer requirements and whether the product grade satisfied customer requirements.

From now on, the scope and validity of UL certification registration and the method of preparing certification samples have been added to the audit items. In addition, matters concerning contracts with customers (specification items) and public certification other than UL certification have also been added to the scope of audit.

(a) The Chemical QA Department will conduct audits at least once a year, focusing on the status of compliance with rules, and (b) the Quality Assurance Promotion Department will conduct audits at least once a year, focusing on the appropriateness of the rules themselves.

(2) Witness inspection for preparation of test samples for certification, and implementation of flammability tests

In addition to the above, the General Manager of the SC Ceramic Materials QA Division and the Manager of the Chemical QA Department will attend preparation of test pieces for new registration and FUS as well as the in-house flammability tests, and conduct unannounced flammability tests by a third party at least twice a year.

4. Thorough control by CS Promotion Division (headquarters quality assurance division) (third fort)

The CS Promotion Division is completely independent of the business groups. This division is responsible for implementing QMS management and audits, and also has a function to foster quality awareness and enhance improvement of skills through quality-related training. As to the specific improvement items related to this problem, the following two points are required.

(1) Special audits

In the past, special audits were conducted in accordance with instructions from top management. However, as an audit that must be conducted, an initial audit will be added for companies that have joined the Kyocera Group through M&A.

In addition, special audits will be conducted for a certain period of time (about 5 years) for the Chemical Materials Division (including the oversea plants) that caused the problem this time, focusing on the confirmation of the implementation status and

effectiveness of each corrective action.

(2) Quality training

The CS Promotion Division will conduct a new training program for all employees regarding the Kyocera Quality Policy (see below) in order to encourage all employees to adopt the basic philosophy necessary to promote quality-oriented management. In the past, training was provided only for managers and those promoted to higher positions, however, training for all employees will be added.

Kyocera Quality Policy
1. Kyocera places top priority on our environmental management and product safety systems.
2. Kyocera provides products and services to our customers that exceed their expectations by putting them first.
3. Kyocera aims to be a world leader in quality by doing every job right the first time.

5. Audits conducted by the Corporate Global Audit Division (fourth fort)

As a completely independent organization, the Corporate Global Audit Division has the function of auditing the operation of all departments from the viewpoint of internal control. In order to conduct audits that are completely independent of the customs of the business divisions and specialized fields, this division conducts inspection mainly by reviewing documents and records. In addition, this division intends to detect and prevent inappropriate conduct through interview at each level. In relation to the problem this time, this division will conduct intensive audits for a certain period of time to determine whether corrective action is implemented effectively at each stage from the first to the third forts above.

IV. Resolving underlying and indirect causes of inappropriate conduct

1. Motivation and justification

Among the underlying and indirect causes of the inappropriate conduct in this case, [1] motives and [2] self-justification shall be resolved by implementing measures such as "fostering and reinforcing a sense of ethics and compliance awareness regarding quality assurance" mentioned above and "improvement of organizational culture" mentioned below.

2. Opportunities for inappropriate conduct

[3] Opportunities for inappropriate conduct will be eliminated by ensuring the involvement of the quality assurance department in monitoring of new UL registration and FUS response.

V. Improvement of organizational culture

1. Personnel reshuffle

Kyocera will dismiss those who have been aware of UL issues but have continued tolerating them for a long time, and appoint appropriate persons from other divisions to be managers. In doing so, Kyocera will provide sufficient follow-up, considering that the new managers do not necessarily have knowledge of the chemical business.

In addition, Kyocera will actively employ outside personnel with expertise in matters related to chemical materials to quickly rebuild our chemical business.

2. Strict punishment of personnel

Kyocera will implement fair and appropriate personnel measures for managers who have been aware of UL issues but have continued tolerating them for a long time, taking into account their positions, responsibilities, degree of involvement in the inappropriate conduct, and degree of contribution to investigation and correction.

3. Creating an environment where anybody can express opinions

The UL issue was uncovered in a follow-up interview with a young employee. As in this case, Kyocera will add quality issue questions to the items of HR follow-up interviews.

At the Chemical Materials Division, the general manager will interview the employees in the division in order to communicate better with the employees. Through conducting the interviews, the employees will have the opportunities to talk about concerns or troubles regarding their work. The general manager will also have the opportunity to understand the employees' concerns or troubles.

Kyocera will also recover the trust from its employees in the workplace by ensuring that Kyocera thoroughly responds appropriately to UL issues.

VI. Improving and strengthening the internal reporting system

Kyocera will continuously operate the external contact point for quality matters related to Kyocera's chemical products, and will gather opinions from employees.

In addition, Kyocera will once again notify all employees about the internal reporting system. Furthermore, Kyocera will also consider measures to enhance the reliability of the internal

reporting system for employees, including the establishment of external contact points utilizing outside experts.

VII. Establishment of a systematic data and document management system

Since the Chemical Materials Division was not fully aware of the data and document management rules adopted by the Corporate Ceramic Materials Semiconductor Components Group, Kyocera will reintroduce the data and document management rules to the Chemical Materials Division, and ensure proper operation.

VIII. Review and improvement of PMI

In 2002, Kyocera acquired Toshiba Chemical Corporation, and changed the name to Kyocera Chemical Corporation. However, changes were limited to the name of the company and the ownership, the previous operation remained intact and there was no significant change in operational procedures. Although officers and employees from Kyocera have previously been appointed as directors of Kyocera Chemical Corporation, since Kyocera mainly handles ceramic products, and Kyocera had no previous experience in the chemical business, the officers and employees entrusted many of their daily operations to the employees from the Toshiba Chemical Corporation. That is considered to be the reason for insufficient management. Moreover, it has become clear that Kyocera's company culture such as the Kyocera Philosophy and Amoeba Management did not function fully.

Therefore, Kyocera will once again thoroughly implement PMI (post-merger integration) at the Chemical Materials Division, foster an organizational culture in which employees can express their opinions openly, and build a monitoring system in accordance with Kyocera's rules. In addition, Kyocera will thoroughly implement PMI not only in the Chemical Materials Division but also in any company which joins the Kyocera group through future M&As to prevent the reoccurrence of similar cases.

IX. Establishment of an investigation team for continuous investigation and improvement

As described in the Investigation Report of the Special Investigation Committee, the committee sent in a report describing problems other than the UL issue to Kyocera. Based on the results of surveys such as questionnaire survey, digital forensic survey, information provided to the committee's contact point, interviews and on-site investigation, this report indicates that there are problems to be addressed continuously.

Kyocera will establish an investigation team to examine the contents of the report, and fully eliminate the problems. The team will consist of members from departments other than the Chemical Materials Division, such as quality assurance, environmental safety, and

compliance. In addition, outside experts in chemistry will be appointed.

X. Conclusion

Kyocera would like to express deepest apologies for the inconvenience Kyocera has caused to customers and stakeholders due to the inappropriate conduct with regard to UL certification of Kyocera's chemical products.

Kyocera will make every effort to prevent the reoccurrence by implementing the above corrective measures for the problems identified by the Special Investigation Committee. Kyocera will also strive to raise compliance awareness and take sincere measures to regain the trust from customers and stakeholders.