

[Attachment] Detailed Recommendations of the Expert Committee (excerpt)

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Recommendations for recurrence prevention

The expert committee recommends the following measures to prevent recurrence.

1. Enhancing compliance awareness

(1) Improving compliance education

A lack of compliance awareness in the resin and plastic related technical departments is considered to be one of the causes of the continuously inappropriate action regarding UL certification.

After the prior quality problem at Toray Hybrid Cord, Inc. (hereinafter, “THC”), Toray established the Quality Assurance Division and placed all the company’s quality assurance departments and sections under the new division. Improvements to comprehensive compliance education were also made, with the senior management team leading the way. These included quality assurance education during Quality Assurance Compliance Month run by the Quality Assurance Division, Mission BEAR¹ led by the Compliance Dept., and the Toray Philosophy Project² directed by the Corporate Strategic Planning Division.

In light of the UL certification problem however, the effectiveness of compliance education at Toray now needs to be further enhanced. In compliance education, for example, the following points should be emphasized.

- In addition to basic legal compliance, adherence to private-sector certification rules and standards must also be emphasized, based on laws and regulations. Employees need to fully understand the significance, purpose and role of each system.
- Compliance should be prioritized over cost reduction, on-time delivery, and order

¹ Mission BEAR activities are based on plan-do-check-act (PDCA) cycles, and “BEAR” is the acronym for remembering Toray's Compliance Action Principles. The activities started with conducting questionnaires at each Toray Group company, identifying compliance issues and risks, and then drafting and implementing response plans.

² This project aims to ensure that all employees fully embrace and practice the Toray Philosophy (a concept of management principles that underpins Toray’s operations, based on the principle of “realizing that corporations are public institutions of society and contributing to society through our business activities”).

maintenance etc.

- Any compliance violation inevitably comes to light. Once it does, it can easily damage the company's reputation built up over decades. It can even lead to a situation that threatens the company's survival, and will certainly cause great inconvenience to customers.
- Those higher in the organization have many more options for solving compliance problems. Therefore, the sooner a compliance violation is discovered and reported to senior managements, the less negative impact it should have on the company and external stakeholders.

Another good option is to regularly conduct employee training using this UL certification problem and those of competitors as case studies.

(2) Incorporating quality assurance contribution into performance reviews

In order to give personnel an incentive to prioritize quality assurance over short-term profits, such efforts need to be rewarded in performance reviews. Accordingly, quality assurance contribution can be included as a non-financial evaluation criteria for personnel.

(3) Sharing recurrence prevention activities

In order to raise and maintain employee compliance awareness and to promote measures to prevent a recurrence of any UL certification problem, progress made on such measures can be shared on a website.

(4) Heightened and continued commitment by the senior management team

Organizational culture is molded not by words but through an accumulation of actions over many years. Employees tend to model their own behavior on that of their superiors. When senior managers change their behavior, the behavior of middle managers soon changes as well, which ultimately leads to behavior modification on the frontlines. Therefore, in order to improve the corporate culture of the entire company, action must begin with senior management. In particular, the role of the president is extremely important. The president must personally convey to employees how serious the management team is about compliance. Consequently, in order to prevent any recurrence of the UL certification problem, the president will need to take action to ensure thorough compliance.

After the THC quality problem, Toray established the Quality Assurance Division and placed all the company's quality assurance organizations under its umbrella. It is not easy to create a new division responsible for all quality assurance and change the position of existing quality assurance departments company-wide. It will not work unless senior management is serious about preventing quality assurance violations. Moreover, as mentioned in item (1) above, Toray has been enhancing its compliance education since the THC quality problem, with senior management leading the way. Considering these measures, we can say that since the THC quality problem, a degree of effort has been made to convey how serious the management team is about raising compliance awareness.

Nevertheless, it takes a considerable amount of time for compliance awareness to be thoroughly instilled across the Toray Group. The fact that the UL certification problem remained unreported to the relevant departments and officers for several years, even after the THC quality problem and despite the improvement measures taken, indicates a serious problem.

Therefore, Toray's senior management team needs to further ramp up their ongoing commitment to raising compliance awareness following the THC and the UL certification problem.

Specifically, it is important for the president and other senior managers to continue delivering compliance messages on a frequent basis, and to support the ongoing enhanced compliance education that began after the THC quality problem. These messages can be delivered not only through the Group's intranet and mass-emailing systems, but also by having executives visit Group sites and directly share their expectations with employees. In addition to the delivery of management team messages, opportunities can be created for senior managers to engage in dialogue with frontline employees. Through this kind of two-way communication, the management team can sincerely show employees how serious they are about compliance.

This is just one example, and senior management should continue to take action that conveys to all employees how serious they are about compliance being the top priority.

2. Establishing work procedures and an education system for UL-related operations

A lack of employee knowledge and education regarding the UL certification system is considered to be one of the causes of the continuously inappropriate action regarding UL certification.

Accordingly, detailed work procedure manuals for operations related to UL certification (hereinafter, “UL-related operations”) should first be prepared. The manuals should specify the exact rules for UL-related operations and also explain how to keep UL operation records. These rules will apply, for example, to UL applications as well as contact methods and documents related to UL’s Follow-Up Service (FUS). Another example is the design procedures and rules to be followed when developing products to be UL certified, and methods for confirming that they have been followed. They also apply to procedures and rules to be followed when developing or improving UL-certified products that require subsequent modifications, and ways to confirm that they have been followed based on an approval process involving positions such as the quality assurance section manager. The manual would also need to include a description of the equipment used for UL-related operations.

Along with the creation of procedure manuals, those involved in UL-related operations must be instructed to follow the manuals without fail. A system to confirm that relevant individuals fully understand the manuals needs to be implemented as well.

Moreover, a system could be established to register UL application formulations and to ensure that they cannot move to production unless personnel in multiple departments confirm that the production formulations actually used are the same as the production formulations submitted on the UL application formulations. Also seminars on UL-related operations can be held on a regular basis for relevant personnel, utilizing an external organization that specializes in UL-related operations.

3. Transferring personnel between business divisions and other interaction

Personnel transfers were only carried out within the resin and plastic related technical departments, which resulted in creating a closed organizational culture. This is considered to be one of the reasons for the continuously inappropriate action regarding UL certification.

Consequently, personnel transfers should be carried out between different business divisions to help prevent them from becoming closed-off organizations. To do this, guidelines should be established concerning the relevant positions, length of postings, and the number of individuals to be transferred each time. While such personnel changes may pose disadvantages in the short term, the advantages will be much greater over the long term.

Regular opportunities could also be created for personnel in different business divisions to interact and exchange ideas. These might include joint compliance study sessions attended by employees from multiple business divisions.

4. Establishing a system to confirm UL compliance by the internal quality assurance organizations and/or external organizations

One of the reasons for the continuously inappropriate action regarding UL certification was that the UL-related operations were essentially limited to the technical departments itself. Therefore, a system is needed to ensure quality assurance organizations and/or external organizations are involved in UL-related operations.

To begin with, the quality assurance organizations should be substantially involved in UL applications. Specifically, each quality assurance section should confirm two things: (1) the UL application formulation and the production formulation are the same; and (2) there is stable performance according to the UL standard in the mass production process when the production formulation is used. If necessary, the participation of an external organization specializing in UL compliance could also be obtained.

Regarding the handling of FUS procedures, the quality assurance organizations and/or an external organization should take charge of preparing and sending test pieces to UL. It has already been decided that FUS procedures involving the Toyolac Technical Section and the Plastics Technical Dept. will be transferred to the quality assurance sections at the Chiba and Nagoya plants, which will now prepare and submit the test pieces.

5. Strengthening the organizational structure of quality assurance organizations

(1) Ensuring organizational independence of quality assurance organizations

The absence of quality assurance organizations that were organizationally independent from technical organizations was one reason for the continuously inappropriate action regarding UL certification.

In light of THC quality problem, Toray established the Quality Assurance Division on February 1, 2018, placing the quality assurance departments and sections of each business division under the newly established division on April 1 of the same year. Quality assurance sections at plants were also placed under the Quality Assurance Division on April 1, 2019.

The Quality Assurance Division is organizationally independent from the Manufacturing Division, to which the Chiba Plant, the Nagoya Plant and the Plastics Technical Dept. belong. Hierarchically, both divisions are organizations located at the same level. For this reason, quality assurance departments and sections under the Quality Assurance Division can be said to be operate independently of the technical organizations

already. New measures in this specific regard are therefore not considered necessary.

(2) Monitoring and supervision of quality assurance sections activities by Quality

Assurance Division and other internal and/or external organizations

The lack of monitoring and supervision of the activities of the quality assurance sections at Chiba and Nagoya plants by other internal or external organizations was another reason for the continuously inappropriate action regarding UL certification. Therefore, a system is needed for other internal organizations and/or external organizations to monitor and supervise the activities of quality assurance sections.

Specifically, the Quality Assurance Division could audit whether the quality assurance sections under its umbrella are taking appropriate action with regard to UL-related operations. In addition, methods³ could be devised for the Quality Assurance Division (general manager, deputy general manager, Quality Assurance Planning & Administration Dept. staff, etc.) to audit the status of operations at the quality assurance departments under its umbrella and for audits between quality assurance departments at different businesses.

Further, it may be effective to ask external organizations specializing in UL-related operations to monitor and supervise the activities of quality assurance organizations for a certain period of time until a new operational structure is established and compliance awareness is pervasive throughout the Group.

6. Establishing system to ensure misconduct is reported to Toray administrative organizations and other parties

Overall, the Toray structure for ensuring that misconduct is reported to administrative organizations was inadequate. A system should therefore be established to ensure that misconduct is promptly reported to administrative organizations.

(1) Clarifying rules for cases in which employees become aware of misconduct or suspected misconduct

It is first necessary to clearly define the rules set out in internal regulations for when an employee becomes aware of misconduct or suspected misconduct.

Specifically, internal regulations regarding quality assurance and other matters could

³ An audit by the Quality Assurance Division of quality assurance departments and sections is an internal self-audit within the organization.

stipulate that awareness or suspicion of conduct that violates rules regarding UL-related operations must be reported to the Quality Assurance Division within a certain period of time (within three business days, for example), regardless of the financial impact, the severity of the case, the determination of responsibility, or whether the conduct has been corrected.

(2) Establishing system to encourage use of whistleblowing hotline

Regarding whistleblowing hotlines, rules and systems to protect whistleblowers should be established and sufficiently publicized within the Group based on the Amendment to Whistleblower Protection Act and guidelines related to the Act, which will take effect on June 1, 2022.

In addition, when publicizing the whistleblowing hotline system, it is advisable to eliminate any rule suggesting “Please consult with your supervisor first.” As a general rule it is best that problems needing to be resolved in the workplace are first reported to a supervisor. However, in many cases, the whistleblowing hotline is utilized precisely because a resolution is difficult if the problem is reported to a supervisor. The suggestion “Please consult with your supervisor first” is therefore inappropriate when referencing the whistleblowing hotline.

In addition, in order to clarify that issues related to UL-related operations, such as the UL certification problems in question here, fall within the scope of whistleblowing, specific examples could be included in e-learning materials and in-house pamphlets. It could also be stated clearly that violations of rules regarding private sector certification also fall within the scope of “whistleblowing regarding serious misconduct cases.”

(3) Improved and continued internal surveys (Toray Group-wide surveys) by quality assurance organizations

In the internal survey (group-wide survey) conducted each fiscal year, it is necessary to change the procedure to have employees of group companies also submit their responses directly to the Quality Assurance Division.

The system in the group-wide survey should be also changed so that the Quality Assurance Division can check each respondent’s answers, including any additional comments they may provide.

In addition, group-wide surveys should state as clearly and specifically as possible

that violations of rules regarding private-sector certification fall within the scope of the survey.

Toray should continue to conduct these group-wide surveys after the improvements are made, as they are an effective method to ensure that any misconduct is quickly discovered.

7. Conclusion

The expert committee's analysis of the reasons for UL certification problem and its recommendations for measures to prevent recurrence are described above. In retrospect, however, there were multiple opportunities to correct these situations during the time that they persisted. Several attempts were made within the resin and plastic related technical departments to correct the situation, but these were not successful, and the matter was not reported in a timely manner to the appropriate departments or executives. Essentially, the more serious the implications for the company, the more quickly the organization as a whole needs to understand and address the situation. The higher the management position, the greater the number of options for solving compliance problems and the more fundamentally these issues can be resolved. It is regrettable that the UL certification problem were not reported earlier to departments other than the resin and plastic related technical departments and that the best possible measures were not promptly taken.

It is true, however, that the efforts made in response to THC quality problem to strengthen compliance awareness at Toray are gradually beginning to bear fruit. The Committee hopes that the analysis and recommendations in this investigative report will lead Toray to establish a more effective system for preventing the recurrence of misconduct and contribute to the sound development of its business in the future.