

Report

Supervision of the Federal Inspectorate for Heavy Current Installations (ESTI) over Operators of High-voltage Grids

Authors:

Dr Michael Merker
lic. iur. Alexander Rey

Dr. Markus Binder
LL.M.
Rechtsanwalt und Notar

Dr. Michael Merker
Rechtsanwalt

Gunhild Kersten
Rechtsanwältin

Alexander Rey
Rechtsanwalt

Dr. Andreas Binder
lic.oec.HSG
Rechtsanwalt

Markus Läufer
LL.M.
Rechtsanwalt

Christian Bär
Rechtsanwalt

Dr. Ruth Arnet
Rechtsanwältin und Notarin

Markus Zimmermann
Rechtsanwalt

Dominik Rothacher
Rechtsanwalt

Konsulent
Dr. Julius Binder
Rechtsanwalt

Unternehmensberatung
Binder & Partner AG

Binder Rechtsanwälte
Rechtsberatung und Notarie

Langhaus am Bahnhof
CH-5401 Baden
T +41 (0)56 204 02 00
F +41 (0)56 204 02 01
mail@binderlegal.ch
www.binderlegal.ch

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Binder Rechtsanwälte und
Merker Kersten Rey

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I. SUMMARY

1. Commission

Following the incidents involving the electricity outage in Italy, the Swiss Federal Office of Energy (SFOE) commissioned the Binder legal practice to draw up a report that would examine the issue of which supervisory duties are entrusted to the Federal Inspectorate for Heavy Current Installations (EStI) in the field of high-voltage grids, and how this supervision was exercised in recent years in general, and in particular with respect to the Lukmanier line and the San Bernardino line.

2. Supervisory duties of the EStI

- a. Within the framework of the establishment and alteration of high-voltage lines

Swiss electricity legislation contains detailed regulations concerning the construction and alteration of heavy current installations (so-called planning approval procedures). The EStI is the first-instance approvals authority, and is charged with conducting comprehensive assessments of whether proposed projects comply with the statutory regulations. This *preventative supervision* is supplemented by an acceptance inspection duty. Each newly-established or altered plant is subject to an acceptance assessment by the EStI. This is designed to ascertain whether the plant is in compliance with the provisions of the law and the planning approval.

The EStI uses precisely-defined procedures to accept newly-established or altered installations. On the basis of documentary evidence, the authors have been able to ascertain that these procedures and the statutory regulations have been adhered to. The checks also looked in particular at whether the spatial regulations (distance of the lines to buildings, the ground and fences) were adhered to.

The reports also detail which further measures the plant owners have to perform, or which documents need to be subsequently submitted.

With respect to high-voltage lines, the EStI fulfils its preventative supervision remit correctly. In some cases, EStI contractually assigns the acceptance of other heavy current installations to Electrosuisse. In the view of the authors, this is inadmissible.

b. Supervision of existing high-voltage lines

By contrast, the regulations concerning the supervision of heavy current installations that have already been established are rudimentary. This *repressive supervision* adheres to the principle that the utility companies are themselves responsible for operating their installations, and should submit these to regular checks. In organisational and personnel terms, while the EStI was formerly part of the Electrosuisse private association, it has subsequently become autonomous. The EStI has been given responsibility by the Swiss government for exercising the senior supervisory authority over heavy current installations. Supervision in the repressive sense is exercised on the one hand through *periodic* checks, and on the other hand in response to reports *concerning specific events*.

Periodic checks of the installations in the 220/380-kV range are exercised by EStI within the framework of the existing regular contacts with the high-voltage grid owners (in conjunction with planning approval procedures, the acceptance of newly-established installations, and information about future projects). The EStI does not conduct actual periodic checks merely for this purpose. EStI inspectors secure knowledge of the condition of the installations in the 220/380-kV field within the framework of the various regular contacts maintained with the high-voltage grid owners, which enable them to make assessments within the framework of their supervisory duties. However, the written documentation of these inspection activities conducted by EStI has been shown to be inadequate. The demonstrability of the inspection activities is a formal part of the supervisory remit; greater attention should be paid to this aspect.

In a variety of discussions, both general in nature as well as on the basis of relevant documents, it proved possible to ascertain that the material supervisory duties of the EStI had indeed been exercised in the specific cases of the Lukmanier line and San Bernardino line. In the case of other heavy current installations (not high-voltage installations), the EStI assigns activities to Electrosuisse within the framework of the period checks. In the view of the authors, this is inadmissible.

II. COMMISSION AND PRINCIPLES

A. COMMISSION

The Swiss Federal Office of Energy (SFOE) commissioned the Binder legal practice (Dr Michael Merker / Alexander Rey) on 30 October 2003 to draw up a report, examining the following questions concerning the supervision exercised by the Federal Inspectorate for Heavy Current Installations (EStI) over the owners of high-voltage grids:

- What are the responsibilities and authorities of the EStI with respect to the supervision and inspection of heavy current installations in general and the high-voltage network in particular?
- How does the EStI exercise this responsibility?
- How has the EStI exercised this responsibility in recent years with respect to the Lukmanier line and the San Bernardino line?

The present report is part of the investigations being conducted by the SFOE with respect to the events of 28 September 2003 affecting the Swiss high-voltage grid in conjunction with the outage in Italy.

B. PRINCIPLES / INVESTIGATIVE ACTIONS

In addition to the statutory principles (Fig. III below), the following documents were made available to the authors:

- EStI publications:
 - No. 106.1294 d: Starkstrominspektorat: Privates Know-How im öffentlichen Interesse
 - No. 240.1199 d: Erläuterungen zur Leitungsverordnung (LEV) of 30 March 1994, September 1999
 - No. 241.0796 d: Erläuterungen zur Starkstromverordnung (STV) of 30 March 1994, July 1996
 - No. 407.1199 d: Erläuterungen sicherer Betrieb von elektrischen Anlagen, November 1999
 - No. 239.1295 d: Weisungen des EStI Anschlussleitungen zu Niederspannungsinstallationen

- Articles of Association of Electrosuisse of
22 May 2003

- Execution order for inspection duties in the year 2002 and declaration of intent for the year 2003 from EStI to SEV of 22 February 2002
- Instruction concerning the separation of activities between EStI and SEV BER-EA and ASE respectively in the field of installation and plant inspections of 17 December 2001
- Model agreement “Consultancy and Inspection Agreement” between Electrosuisse and electricity utility companies
- Consultancy and Inspection Agreement between Atel Versorgungs AG (AVAG) and SEV of 4 February 2002/4. March 2002
- Consultancy and Inspection Agreement between Elektrizitäts-Gesellschaft Laufenburg AG and SEV of 27 October 1988/15 November 1988
- Consultancy and Inspection Agreement between Misoxer Kraftwerke AG and SEV of 15 February 1989/16 February 1989
- Consultancy and Inspection Agreement between Albula-Landwasser Kraftwerke AG and SEV of 27 October 1988/15 November 1988
- Consultancy and Inspection Agreement between Calancasca AG and SEV of 15 February 1989/16 February 1989
- Agreement between the Schweizerische Unfallversicherungsanstalt (SUVA) and the Schweizerischen Elektrotechnischen Verein (SEV) of 16 December 1987/5 January 1988
- Heavy Current Inspectorate Specifications UVG (UStI) of SEV of 11 April 1991
- Checklist EStI MS (medium voltage) free-standing lines
- Checklist EStI cable lines
- Checklist EStI NIV 2002 senior grid operator supervision
- Minutes of the 19th AGEW meeting of 24 September 2002 (excerpt)
- Inspection Report EStI of 7 June 2002 concerning 380-kV line Amsteg-Mettlen, renovation of Canton Uri section
- EStI Inspection Report of 18 July 2002 concerning 380-kV line Amsteg-Mettlen
- EStI Inspection Report of 19 April 2002 concerning 220/380-kV line Samstagern-Mettlen
- Electrosuisse Inspection Report of 23 September 2003 concerning Albula-Landwasser Kraftwerke AG, CH-7477 Filisur
- EStI file VHB-PV03 (quality management)
- EStI letter of 21 October 2003 to SFOE concerning incident of 28 September 2003

- Agreement between the Federal Office of Transport and Energy and the Schweizerische Elektrotechnische Verein of 5 September 1990
- Agreement between the Federal Department of Environment, Transport, Energy and Communications (UVEK) and the Schweizerische Elektrotechnische Verein (SEV) of 18 December 1997 concerning EStI
- Application made by the Federal Department of Environment, Transport, Energy and Communications to abolish the EKEA Commission of 9 June 1999
- Rules of the SEV Co-ordination Commission for the Heavy Current Inspectorate (KKS) of 1 April 1999
- Union for the Co-ordination of Transmission of Electricity (UCTE), Interim Report of the Investigation Committee on 28 September 2003 / Blackout in Italy of 27 October 2003
- Various downloads from www.esti.ch

On 29 October 2003 a meeting took place between representatives of the EStI (Mr M. Chatelain [Head of EStI], Mr D. Marty [Head of Project Approvals], Mr P. Rey [Legal Services]) and the authors (minutes of 30 October 2003).

In their e-mail of 30 October 2003, the authors asked EStI for information about the procedures applied during the inspection of an operator of high-voltage lines. The corresponding report is dated 1 November 2003. This discussion was followed by further contacts, conducted exclusively by telephone, with representatives of the EStI and the SFOE. On 6 November 2003 a meeting took place with Mr W. Bühlmann (head of the Legal Services and Nuclear Energy Department/SFOE) and Mr P. Rey (EStI, Legal Services).

No further (internal) documents were made available to the authors. The very short timeframe for the drawing up of this report ruled out a more detailed examination of the matter. Corresponding references have been made wherever this circumstance had repercussions on the commissioned report.

III. PRINCIPLES OF STATE SUPERVISION

A. DEFINITION AND RESPONSIBILITY

State supervision is a (material) policing activity. It is designed to ensure that a defined protected object is protected from disruptions and dangers. The police remit is consequently to prevent dangers; the protected objects are life and limb,

public peace and order, public safety as well as good faith in business transactions. Police in this sense is a function, not an authority.

One form of state supervision is specialist supervision directed at the supervision of a specific specialist activity; the state supervision over energy utility companies and their installations constitutes energy supervision. The scope of this supervision, however, is defined by the relevant decrees, in particular the Swiss Electricity Act. Specialist supervision is exercised by inspectors (cf. Art. 25 Government and Administration Organisation Ordinance [RVOV] of 25 November 1998).

Responsibility for passing police law is established in accordance with the distribution of powers laid down in the constitution; this means the cantons have (general) jurisdiction over the police. In addition to this principle, however, there are numerous specialist fields where the federal government has the authority to standardise; as a rule, this also entails the right to pass special policing regulations. Furthermore, this also includes the power of the federal government to pass regulations concerning the transport and the delivery of electrical energy (Art. 91 BV).

B. PRECONDITION FOR POLICING MEASURES

1. Legal principles

- a. Statutory principles
 - aa. General police law

Policing activity, like all administrative actions, is subject to the principle of lawfulness (legality principle). The legal principle is a precondition for policing measures; this, despite the fact that general policing laws are largely lacking in Switzerland (Ulrich Häfelin/Georg Müller, Grundriss des Allgemeinen Verwaltungsrechts, 4th edition, Zurich 2002, Rz 2462).

- bb. Special laws

However, special regulations lay down numerous policing standards. In accordance with the principle of “*lex specialis derogat legi generali*”, these have precedence over general regulations. This means that when it comes to assessing responsibility for policing instructions, it is always necessary to ascertain if there is a special statutory foundation for the particular specialist field; if this is the case, then general policing law tends not to be applicable (Bill

Drews/Gerhard Wacke/Klaus Vogel/Wolfgang Martens, *Gefahrenabwehr*, 9th Edition, Cologne 1986, p. 154). This principle can lead to problems if insufficient account is taken of the need for policing rules in the respective special decree. In such instances it is necessary to check whether or not the law was designed to establish a definitive rule; if this question is not answered by the text of the law itself, then this will have to be determined through corresponding interpretation.

Special laws establish differing standards. For example, it is sometimes the case (even though this may be problematic with respect to the lawfulness principle) that a general authority may be established for the specialist field in question that is based upon the general policing clause (cf. lit. b below). If a corresponding provision is lacking, then in case of doubt it is necessary to assume that the lawmakers intended to use the special rule as a comprehensive instrument of standardisation, and wanted to exclude recourse to the general policing clause. This needs to be taken into account within the framework of the interpretation.

b. General policing clause

The general policing clause is the legal rule (laid down for the federal government in Art. 185 Para. 3 of the Federal Constitution of the Swiss Confederation [BV] of 18 April 1999) which empowers the responsible authority to take police measures to protect policed goods, in order to prevent a serious and direct danger or to rectify a serious disruption that has already occurred (Häfelin/Müller, Rz 2467). However, for this clause to be applicable, this must be a matter of urgency.

The general clause cannot be viewed as a sufficient statutory basis if typical risk situations have not been standardised, in spite of an awareness of the problem (BGE 126 I 112). This principle also has repercussions for specific fields for which explicit policing regulations have been established; in such instances, it is necessary to proceed on the basis of the principle that the lawmakers did not want to establish the possibility of further-reaching police intervention, and that for this reason the possible scope of policing actions within the framework of the general policing clause are limited to genuine extreme situations (Häfelin/Müller, Rz 2468).

c. Contractual administrative agreement

Insofar as private individuals require a permit for their activity or possess a concession, then the right of supervision (with respect to the permit, this is likely

merely to supplement the statutory instrument) may be laid down in such rulings and agreements. This has to be checked on a case-by-case basis.

2. Principle of proportionality

The policing measure must be proportionate; in terms of time, place, personnel and material considerations, it may not extend beyond that which is necessary for policing purposes. The principle applies to the legal foundation as well as to specific individual directives (Häfelin/Müller, Rz 2479).

C. DUTY TO TAKE POLICING MEASURES?

1. Decision-making discretion

With respect to the exercising of (subsequent) supervision, the authorities are in general terms bound by the rules governing decision-making discretion.

a. Opportunity principle in general

If there is a risk to public safety within the meaning of the relevant statutory provisions, that is to say, if the necessary preconditions for a police intervention have been met, then as a matter of principle the responsible authority has the power to intervene. However, this does not necessarily mean that it is also obliged to make a corresponding intervention. Under general police law, the decision whether or not to take specific actions, as well as the nature and scope of such actions, tends to lie at the discretion of the empowered police authority. In specific individual cases, this police authority may decide on its own responsibility whether or not to intervene. This principle is known as the police law opportunity principle. Where the boundaries actually lie in this field is an extremely delicate question. There is a trend towards interventions increasingly becoming an actual duty, as in this respect the state's determination to take precautionary measures has precedence, while at the same time, individuals have comparatively little personal protection from the dangers of the modern world (Häfelin/Müller, Rz 2445).

b. Opportunity principle in the case of special laws

The opportunity principle applies essentially only to general policing law (Drews/Wacke/Vogel/Martens, p. 372). If the supervision or the associated police activity is based on special laws, then additional responsibilities are assigned to the police authorities. It is then necessary to check on a case-by-case

basis whether or not the respective law grants the authorities the discretion to take decisions and/or to make choices (with respect to choosing the means) (Drews/Wacke/Vogel/Martens, loc. cit., p. 372; cf. also Ulrich Bündenbender/Wolff Heintschel von Heinegg/Peter Rosin, *Energierrecht I, Recht der Energieanlagen*, Berlin/New York 1999, Rz 1078 ff.). The answer to this question has to take into account the choice of wording in the law (use of the terms “discretion” or “can”) and the interpretation of the relevant provisions.

2. Discretion to select

When it comes to selecting the appropriate response to the ascertained problem, the authorities are granted the discretion to choose; this discretion must be exercised in accordance with the principle of proportionality. That is to say, the measure must be taken following a reasonable consideration of all the interests at stake, as well as their relative importance. The measure thus selected must be that which is likely to have the smallest negative impact on the individual and society at large. Furthermore it may not lead to a disadvantage which is clearly out of proportion to the desired successful outcome.

If the directive has an effect upon the approved activity (that is to say, if it consequently restricts the original permit), then this may be imposed only in the sense of a provisional measure (assuming the corresponding preconditions have been met); permanent restrictions may be imposed only by the authority responsible for the permit.

D. SUPERVISION OF ENERGY INSTALLATIONS

1. Principles

Electrical installations are subject to supervision. Electrical installations are installations used to generate and transmit energy. The present report is focusing in particular on the supervision of installations used to transmit energy (the electricity grid). The relevant statutory provisions are contained in a variety of decrees (cf. Fig. III below).

The supervision over lines is exercised both preventatively as well as in a monitoring sense.

2. Preventative inspections

a. Police permit

Before any installation can be established, a variety of permits must first be obtained; during the course of the process of granting such permits, the authorities check in advance whether the installation (for example) is to be established in accordance with recognised technological principles. This ensures that proper account is taken of the relevant safety considerations before the installation becomes operational. The approval constitutes a police permit and preventative state supervision. Swiss electricity law places a significant emphasis on this element (cf. Fig. III/B/3 below).

b. Supervisory inspection limits

The function of state supervision lies in monitoring activities defined by law or a statutorily-defined condition. This means a distinction needs to be drawn between state supervision in the sense of supervisory inspection on the one hand, and preventative inspection on the other; supervisory inspection can be exercised to ensure that the conditions laid down by the approvals authority are being adhered to; however it is not permissible to cite state supervision in order to intervene in operations which comply with the provisions of a permit and to cause such operations to be permanently modified; the only body entitled to do this (provided that the conditions for revocation have been met) is the responsible approvals authority. This differentiation is not unimportant if the supervisory authorities issue a complaint concerning a matter which, from a police perspective, was covered by the framework of the approvals procedure.

3. Supervisory inspections

a. Legal nature, purpose and responsibility

Supervisory inspection is an instrument of state intervention that requires a statutory foundation. Its purpose is to ensure that the supervised activity is performed within the framework of the law and in accordance with the provisions of the possible permit required for the activity.

On the basis of Art. 2 of the Ordinance concerning the Federal Heavy Current Inspectorate (Heavy Current Inspectorate Ordinance) of 7 December 1992, the supervision and inspection *inter alia* of the operation and maintenance of electrical installations is assigned to EStI.

b. Scope of the supervisory inspection

If state supervision has been provided with a statutory basis, this regularly gives rise to the question of how and to what extent this supervision should be exercised. Supervision can mean that the responsible authorities are obliged on a permanent and continuous basis to ensure that the provisions of the relevant decrees are being adhered to. However, supervision can also mean that checks are conducted merely on a random basis, e.g. in order to verify that an installation complies with the statutory requirements. The corresponding difference in approaches derives from the particular law governing the supervisory function in question.

Comprehensive supervision, that is to say entailing complete inspection, is neither the objective of the supervision, nor would this be possible or practicable; the police authorities have a monopoly over the activities which this would entail, and these cannot be exercised by private entities or individuals. One of the principles of the electricity legislation is that the acting private entity or individual exercises his activity at his own responsibility in accordance with the relevant provisions (Art. 20 EleG).

If supervision is required by law, then lawmakers need to ensure as a matter of principle that this can be exercised effectively. Otherwise such supervision would become an irrelevance. If the decrees themselves are unspecific in supervisory legal terms (that is to say, if they do not specify what form the supervision should take), then it is necessary to decide (on a material basis) what degree of supervision is required, also taking into account value decisions of a fundamental nature as well as the purpose of the regulation. In this conjunction, the regulatory provisions of the law whose adherence is to be supervised constitutes the most important point of reference. If a decree is designed to safeguard public safety and health, then the supervision must focus on this objective, and the correction of other deficiencies (even if these are apparent) should be left to the private autonomous entity of the respective company.

c. Powers and duties

aa. Powers

Effective state supervision can only be achieved if the authority responsible for the supervision is assigned the relevant powers. As state activities require a statutory foundation, the corresponding powers must be specified in the governing decree, as otherwise they would be unenforceable.

There is another distinction between state supervision of individuals or organisations outside the administration on the one hand, and internal administrative supervision on the other. In the case of the latter, further-reaching intervention is possible, purely on the basis of the hierarchical structure of the administrative apparatus and the public-sector structure of the individual subordinate relationships.

In the specific instance which is the subject of this report, the powers need to derive from the relevant electricity legislation. Examples in this respect would include the right to enter the installations, to demand the surrender of documents, and to examine these, to order that measurements be conducted or to that remote monitoring equipment be installed, as well as the right to question relevant individuals. In the Federal Atomic Energy Act, the federal government granted very far-reaching supervisory powers in view of the safety interests at stake in the nuclear energy sector. This means that the government and the bodies appointed by the government have the power “in the exercise of their supervisory remit, to issue all directives at any time which are necessary for the protection of people, third party objects and important legal goods, or to safeguard the external security of Switzerland and the obligations which it has entered into under international law” (Art. 8 Para. 2 of the Federal Law Concerning the Peaceful Utilisation of Atomic Energy [Atom Act, AtG] of 23 December 1959).

bb. Duties

It is essential that the state supervision exercised by the respective authority is exercised demonstrably. This is in order to ensure that superior authorities can verify that the correct statutory or supervisory actions have been performed. The duties can be derived from statutory provisions or official instructions; however, it would also be possible for proof to be required that the supervisory activity corresponded to the supervisory duties. This requirement, insofar as it is suitable, lies at the discretion of the responsible authority.

Specifically, this could entail the maintenance of inspection reports that specify the place, the time, the nature, the scope and the result of the inspections, as well as the compilation of annual reports concerning the inspection activities.

IV. STATUTORY PRINCIPLES GOVERNING THE SUPERVISION OF ELECTRICAL INSTALLATIONS

A. FEDERAL CONSTITUTION (BV) OF 18 APRIL 1999

Art. 91 BV grants the federal government concurrent legislative powers with respect to the transport and delivery of electrical energy (René Schaffhauser, in: Die Schweizerische Bundesverfassung, St. Galler Kommentar, Zurich 2002, Art. 91 Rz. 3). This establishes comprehensive powers to lay down regulations in the field of the transport of electrical energy (Rolf H. Weber, in: Verfassungsrecht der Schweiz, Zurich 2002, § 60 Rz. 12). The provisions of Art. 91 BV describe *a purely standardised power without specified objectives*, as is also the case with Art. 24^{quater} Para. 1 aBV. The decision to limit the contents of the provision to the allocation of powers can be explained by the fact that the relevant article of the constitution was passed in the year 1908, that is to say, after the EleG (1902), which contains the regulations regarding contents (Rico Jagmetti, in: Kommentar zur Bundesverfassung der Schweizerischen Eidgenossenschaft, Basel/Zurich/Bern May 1995, Art. 24^{quater}, history of its development /materials).

By contrast, regulations concerning contents derive from Art. 89 Para. 1 BV. This specifies that the objectives of the energy policy pursued by the federal government and the cantons include, *inter alia*, an adequate, diversified, secure, economic and environmentally-compatible provision of energy. However, the Federal Constitution does not mention the relationship between installation owners and the federal government.

B. FEDERAL LAW CONCERNING ELECTRICAL LOW CURRENT AND HEAVY CURRENT INSTALLATIONS (ELECTRICITY ACT, ELEG) OF 24 JUNE 1902

1. Terminology

The Electricity Act uses the terms “senior supervisory authority” (Art. 1), “inspection” (title Section IV and Art. 21), “monitoring” and “supervision” (Art. 20). Similar terms are used in the execution ordinances (lit. C ff. below). As has been shown, the theoretical legal classification of the supervisory function is not uniform; the fact that the terms used by legislators and the issuers of ordinances are not always consistent does not make it any easier to define the meaning of the terms.

2. Distribution of roles and actors with respect to the supervision of heavy current installations

Electricity legislation makes provision for a variety of actors with respect to the supervision of heavy current installations, and in particular with respect to the transmission installations. At the forefront here is the “owner of the enterprise” (Art. 20 Para. 1 EleG). He has primary responsibility for the supervising the electrical installations and ensuring that they are in good condition. This essentially means that the responsibility for establishing and operating the installations lies primarily with the respective establisher or operator, and not with the supervisory authority. This can in fact be viewed as being self-evident (at least that was the message provided by the Federal Council to the Federal Assembly in conjunction with the passing of the Federal Law concerning Electrical Low Current and Heavy Current Installations of 5 June 1899, in: Federal Gazette [BBl] 1899 III 786).

The senior supervisory authority over the establishment and operation of electrical installations in accordance with Art. 4 and 13 EleG is entrusted to the second actor, the *federal government* (Art. 1 EleG). For its part, the federal government passes the “inspection over the implementation of the regulations specified in Art. 3 EleG *inter alia*, to an *inspection office*, the EStI (Art. 21). The EStI consequently exercises the senior supervisory authority on behalf of the federal government. For its part, the EStI is subject to the supervision of the UVEK (Art. 1 Para. 3 Heavy Current Inspectorate Ordinance).

In addition to this, a “Commission for Electrical Installations” (EKEA) operates in accordance with Art. 19 EleG. This body exercises an advisory function with respect to the regulations to be passed by the federal government and the decisions to be taken by the federal council or the UVEK. This commission has not met since 1999.

Furthermore, a Heavy Current Inspectorate Co-ordination Commission also exists. The members of this commission also include representatives of the UVEK. This serves to co-ordinate the duties of the Heavy Current Inspectorate in its capacity as the Federal Inspectorate for Heavy Current Installations (EStI) and as the Heavy Current Inspectorate UVG (UStI) (see the regulations of the Co-ordination Commission of the SEV for the Heavy Current Inspectorate [KKS] of 1 April 1999).

3. Supervision in the case of new or altered installations

a.

It is necessary to differentiate between the establishment of new installations or the alteration of existing installations on the one hand, and the supervision of the operation and maintenance of existing installations on the other. The *establishment and alteration* of heavy current installations is dealt with by the planning approval proceedings (Art. 16 ff. EleG in the version of 18 June 1999; Ordinance concerning Planning Approval Procedures for Electrical Installations [VPeA] of 2 February 2000). The EStI acts in this respect as the approvals authority, insofar as there are no differences with other federal authorities, and provided that complaints can be dealt with in a legally valid manner (Art. 16 Para. 2 lit. a EleG). The term “approvals authority” should be understood in the sense of a planning approval authority; it is not necessary to obtain separate cantonal approvals and further federal approvals (Art. 16 Para. 3 and 4 EleG). The approval initially constitutes a police permit (Erwin Ruck, *Schweizerisches Elektrizitätsrecht*, Zurich 1964, p. 41). At the same time, the planning approval procedure also issues rulings on complaints concerning compulsory purchase orders (cf. Art. 16h Para. 1 EleG).

b.

In normal practice, a police approval (also known as a police permit) does not establish any new rights (Häfelin/Müller, Rz. 2526 f.; Peter Hänni, *Planungs-, Bau- und besonderes Umweltschutzrecht*, 4th Edition, Bern 2002, p. 306 f.), as the applicant is already eligible for these by law. Instead, it merely ascertains (on a declaratory and not a constitutive basis) that there are no police obstacles to the intended activity, and that for this reason the entitlement to an approval has been established once the statutory conditions have been met.

The obligatory approvals procedure consequently has a preventative purpose, ensuring that the construction and energy police regulations have been met, and checking that these are also being adhered to (BGE 123 II 259; 119 Ib 222). The supervision exercised during the planning approval procedure is preventative in nature. However, the EStI is obliged to conduct checks within one year of the completion of the installation in order to verify that it has been established in accordance with the regulations and in compliance with the approved plans (Art. 13 VPeA); in this respect, preventative and repressive supervisory functions are mixed.

4. Supervision of existing installations

a.

As far as the supervision of existing installations is concerned, the Electricity Act merely lays down basic principles and the rules of delegation (Art. 1 and 21 EleG). Further rules are to be found (in the field of heavy current installations) in the Ordinance concerning Electrical Heavy Current Installations (Heavy Current Ordinance) of 30 March 1994, the Heavy Current Inspectorate Ordinance and in the Ordinance concerning Electric Lines (Line Ordinance, LeV) of 30 March 1994 (lit. C ff. below).

b.

The term “inspection” used in Art. 21 EleG requires interpretation (cf. also lit. H/2 below). It is necessary to differentiate between this and the term “supervision”: inspection is a means, an instrument for exercising supervision. Inspection comprises on the one hand the periodic appraisal of the installation owners who have been entrusted with applying the regulations concerning heavy current installations. On the other hand, the clarification of outstanding questions arising from particular events or associated with ascertained deficiencies also constitutes an inspection activity within the meaning of the exercise of supervisory powers (cf. also Art. 25 RVOV).

C. ORDINANCE CONCERNING THE FEDERAL HEAVY CURRENT INSPECTORATE OF 7 DECEMBER 1992

1. Principles

The Heavy Current Inspectorate is a special office of the Schweizerischen Elektrotechnischen Verein (SEV), known today as Electrosuisse. While it is unusual for state supervisory powers to be assigned to a private association, in the case of the Heavy Current Inspectorate this can be explained by historical factors. At the time of the creation of the Electricity Act, the SEV already had at its disposal a purely private inspectorate which was deployed to check heavy current installations (BBl 1899 III 808; Ruck, p. 174).

Together with the competence standard laid down under Art. 21 EleG, the EStI Ordinance forms the basis of the supervisory and inspection activities exercised by the EStI. As the EStI represents a special office of Electrosuisse, the special features of the supervisory and inspection activities, insofar as these are not established by the Electricity Act and the ordinances, are governed in a separate

agreement (of 18 December 1997) (Art. 1 EStI Ordinance). The EStI itself is subject to the supervision of the UVEK (Art. 1 Para. 3 EStI Ordinance).

2. Duties of the EStI

The EStI has the following supervisory and inspection duties in the field of heavy current installations (Art. 2 Para. 1 EStI Ordinance):

- Supervision and inspection over the construction, operation and maintenance of electrical installations
- Approval of heavy current installations
- Investigating and recording statistics of accidents and incidents of loss that occur in conjunction with electrical installations
- Involvement in drawing up legislation concerning electrical installations
- Maintaining technical statistics concerning electrical installations

In addition, the EStI supports the Federal Ministry with respect to fulfilling further tasks associated with electrical installations (Art. 2 Para. 2 EStI Ordinance). Finally, the EStI monitors international electrical engineering developments (Art. 2 Para. 3 EStI Ordinance).

Within the framework of its supervisory and inspection remit, a variety of executive powers have been extended to the EStI concerning the establishment of new installations or the alteration of existing installations (see e.g. Art. 2 EStI Ordinance in conjunction with Art. 16 Para. 2 lit. a EleG in conjunction with Art. 1 ff. VPpA).

D. ORDINANCE CONCERNING ELECTRICAL HEAVY CURRENT INSTALLATIONS (HEAVY CURRENT ORDINANCE) OF 30 MARCH 1994

1. Independent responsibility of the installation owners

The title of the 4th Section of the Heavy Current Ordinance is “Inspection and Maintenance”. Based on Art. 20 EleG, this primarily establishes the duty of the owners to inspect and maintain the heavy current installations. Owners are obliged to ensure that their installations are maintained on an ongoing basis, and are periodically cleaned and inspected (Art. 17 Para. 1 Heavy Current Ordinance). In particular, they are required to inspect whether the installations and the electrical equipment connected thereto is in perfect working order, whether the installations comply with the regulations in terms of subdivision, configura-

tion and short-circuit resistance, whether the safety features are correctly set and effective, whether changes have occurred in the area of the installations that could impinge upon safety, and whether the installation diagrams, labels and inscriptions are in place and correct (Art. 17 Para. 2 Heavy Current Ordinance). Any damage or defects must be rectified as the situation requires; in the case of direct danger, immediate measures must be taken (Art 17 Para. 3 Heavy Current Ordinance).

2. Reporting duties and inspection activities

The installation owners must report to the Inspection Office any injury to persons or serious damage to property caused by electricity (Art. 16 Para. 1 Heavy Current Ordinance). The Inspection Office is then obliged to ascertain the causes and must introduce appropriate measures (Art. 16 Para. 2 and 3 Heavy Current Ordinance). The Inspection Office is furthermore charged with recording all reported accidents and incidents of damage, with evaluating these, and with taking appropriate measures to prevent further injuries and accidents (Art. 16 Para. 4 Heavy Current Ordinance).

3. Further regulations associated with the supervisory powers of the EStI

The Inspection Office is mentioned in conjunction with permission to extend the inspection intervals (Art. 18 Para. 2 Heavy Current Ordinance) or if it is determined that the inspection reports must be shown to the Inspection Office upon demand (Art. 19 Para. 2 Heavy Current Ordinance). In the case of overhead installations, the Inspection Office may approve structures that fail to meet distance regulations (Art. 43 Para. 2 Heavy Current Ordinance).

4. Summary

In overall terms, the Heavy Current Ordinance does not contain any regulations that impose detailed inspection or supervisory duties on the EStI. At the same time, however, it establishes the reporting duties of the installation owners which may trigger measures from the EStI.

E. ORDINANCE CONCERNING THE PLANNING APPROVAL PROCEDURE FOR ELECTRICAL INSTALLATIONS (VPEA) OF 2 FEBRUARY 2000

1. Regulations concerning preventative installation inspections

In this respect, reference is essentially made to the passages shown under lit. B/3. When it comes to establishing new high-voltage installations, the initial scope of the EStI's powers extends to granting approvals in the sense of preventative controls. The newly-established installations then have to be subjected to an acceptance inspection (Art. 13 VPeA).

2. Obligation to report changed circumstances

The VPeA does not lay down any regulations concerning the period following the acceptance inspection by the EStI. In particular, it does not contain any standards concerning the exercise of further inspection activities by the EStI. However, the owner of the installation must report to the EStI any changes which impinge upon safety, as well as any alterations to the assessment principles, changes in ownership, and the demolition of the installations (Art. 15 Para. 2 VPeA). The resulting measures and plans must be submitted to the EStI for approval (Art. 15 Para. 3 VPeA). This means that the VPeA also establishes reporting duties that are very broad in scope, which trigger the inspection activities of the EStI and which are no longer directly connected to the planning approval procedure.

F. ORDINANCE CONCERNING ELECTRICAL LINES (LINE ORDINANCE; LEV) OF 30 MARCH 1994

1. Independent responsibility of the installation owners

The Line Ordinance has *similarities to the Heavy Current Ordinance* (lit. D above). Inspection and maintenance duties are primarily the responsibility of the owner of the line (Art. 135 LeV).

2. Reporting duties and inspection activities

The Line Ordinance also establishes reporting duties for the owner of the installation. For example, owners are required to report instances when electrical lines come into contact with other lines and infrastructure installations, as well as the resulting impairment of safety (Art. 9 Para. 2 LeV) and temporary dangers (Art. 10 LeV). In order to make the inspection possible, installation owners

are obliged, upon demand, to present the inspection reports which they themselves have drawn up to the Inspection Office (Art. 136 Para. 2 LeV).

3. Summary

In overall terms, the Line Ordinance does not contain any regulations that impose detailed inspection or supervisory duties on the EStI. At the same time, however, it establishes the duty of the installation owners to report to the EStI, which can trigger EStI measures.

G. DIGRESSION: PLANNED STATUTORY AMENDMENTS

In September 2001 the UVEK presented a draft of a federal law concerning technical safety controls for further discussion. The draft also included *inter alia* an amendment to the Electricity Act. The new rules would have meant that owners were no longer obliged to subject their electrical installations to comprehensive inspections by a state supervisory authority. Instead, the installation owners would themselves have been responsible for ensuring that their installations complied with the statutory regulations, or would upon demand have been obliged to prove that such inspections were conducted on a regular basis. In other respects, the principle of self declaration would in particular have furthermore applied to the inspection of the operational installation. The draft planned to require operators to submit new declarations of conformity to the federal office at regular intervals; these would then merely have been subjected to random checks. In overall terms, the draft law aimed to boost the independent responsibility of the installation owners, while at the same time reducing the state inspection activities.

On the basis of the results of the discussions, the UVEK was commissioned by the Federal Council to draw up a statement for Parliament by the end of 2004. The essence of the reorganisation is the standardisation of procedures applied to checking the safety of technical systems. For this purpose, installations and equipment would be divided into three categories, according to their potential to cause danger. Standard safety checks would then be applied to each of these categories, and this would establish a clear distinction between the individuals responsible for the installation owners on the one hand, and the authorities on the other. The greater the risk potential of an installation, the more intensive the state supervision would be. As far as the authors are aware, heavy current installations are to be placed in the lowest risk potential category.

This indicates that lawmakers are not aiming to make state supervision more stringent. Instead, the existing system by which the owners of heavy current installations are made largely responsible for their own installations is to be emphasised still further.

H. SUMMARY

1. Preventative supervision within the framework of the planning approval procedure

The rules of preventative supervision are established in detail in the Electricity Act as well as in the associated Ordinance concerning Planning Approval Procedures. Both the sequence of the approval procedure as well as the material regulations that have to be adhered to in conjunction with the decision are clearly defined. Furthermore, an inspection of the installation by the EStI has to be conducted within one year following the completion of the installation. This inspection is designed to ascertain whether the installation has been established in accordance with the regulations and in compliance with the approved plans.

2. Repressive supervision of existing installations

a. Principle

The standardisation of repressive supervision is not laid down in particular detail. This is because lawmakers assumed that the energy sector would essentially itself be responsible for operating its installations, and would supervise itself (Art. 20 EleG). However, the statutory provisions are consistent. The respective standard for exercising supervision over electrical installations has to be taken from the overall context of the regulations concerning electricity.

b. Organisation

In Art. 1 EleG, the establishment and operation of low and heavy current installations was placed under the ultimate supervision of the federal government. In Art. 21 EleG, the federal government assigns this supervisory authority to the Heavy Current Inspectorate, which is then responsible for exercising the supervision and which is obliged to conduct inspections to ensure this (Art. 1 f. Heavy Current Inspectorate Ordinance).

Inspection is the supervisory instrument. This serves

- the in-depth clarification of particular questions which arise from current events or deficiencies (cf. Art. 25 Para. 1 lit. a RVOV)
- the periodic examination of particular specialist areas (cf. Art. 25 Para. 1 lit. b RVOV)

With reference to inspection activities, the following systemisation can be derived from Art. 25 RVOV, and this can be applied analogously to the present matter under discussion: supervision is safeguarded by inspection activities, the inspection activity is *event-linked* and must be exercised at *regular intervals*.

aa. event-linked

Event-linked inspections are conducted in response to current events and ascertained deficiencies. The responsible authorities need to be aware of these. In order to enable it to become aware of such circumstances, a range of reporting obligations have been established; the reporting obligations are standardised in areas which lawmakers consider to be sensitive in the sense of a safety-motivated regulation. Such provisions are established, for example, in

- Art. 15 VPeA, in which, in conjunction with the actual approvals procedure, the owners of electrical installations are obliged to report to the Inspectorate any changes in circumstances which could impinge upon safety, as well as any changes to the bases for assessment;
- Art. 25 EleG, which obliges the operators of heavy current installations to provide the Inspectorate with statistical material of a technical nature;
- Art. 16 Heavy Current Ordinance, which obliges the owners of heavy current installations to report to an Inspection Office every injury to persons or serious material damage caused by electricity;
- Art. 9 Para. 2 and Art. 10 LeV, which obliges installation owners to inform the Inspection Office of possible interference with other lines or infrastructure installations.

The supervisory authority must take note of corresponding reports, and must decide what measures are to be ordered, on the basis of its resolution and discretion to select. The reporting duty established by statute does not contain the obligation of the supervisory authority to perform inspections precisely in these material fields; on the contrary, it is necessary to assume that the owners of the

installations are themselves essentially responsible for performing the necessary inspections of their installations; in this respect, the reporting obligations constitute a constraint of independent responsibility. This is motivated by considerations of supervisory law, and should be seen as a milder supervisory measure in contrast, for example to the right to enter property or the right to inspect documents.

bb. periodical

Periodical inspections are not performed in response to current events. Instead, the aim is to check that the installations subject to inspection comply with the statutory regulations by conducting inspections at defined regular intervals.

The EStI is not explicitly required to adhere to any particular inspection rhythm in the field of repressive inspections. For this reason, the scope of the repressive inspections derives from the special statutory supervisory standards. With respect to the subject-matter of the current report, the relevant standards are

- Art. 18 f. Heavy Current Ordinance, which requires installation owners to determine a control interval for each installation section, taking external factors of influence into account. These inspection intervals may not exceed five years, and an inspection report must be drawn up for each inspection.
- Art. 135 LeV, which obliges installation owners to ensure that the lines are kept in good condition and that regular inspections are conducted; in this respect, the inspection intervals may not exceed two years in the case of high-voltage overhead lines.

With respect to the question of the intervals between the inspections conducted by the installation owners as well as between their inspection reports, the inspection rhythm imposed on the installation owners represents the relevant criteria for the inspection activities of the EStI: an inspection activity performed with the same intervals parallel to the inspection activities of the installation owners is sufficient in every instance, even though this may not actually be necessary in every case.

V. IMPLEMENTATION OF THE SUPERVISION OF HEAVY CURRENT INSTALLATIONS BY THE ESTI

A. PREVENTATIVE INSPECTIONS IN THE CASE OF NEW INSTALLATIONS AND ALTERATIONS OF EXISTING INSTALLATIONS

1. The planning approval decision

a. Accreditation

On the one hand, the EStI is accredited by the Federal Office of Metrology as the Inspection Office responsible for the inspection of electrical high voltage and low voltage installations with respect to safety and environmental compatibility (SIS 010). On the other hand, Electrosuisse is certified as an entire company (SQS 9004/ISO 9001/ISO 14001).

b. Internal procedures

The EStI has a detailed procedural manual for planning approval procedures (VHB-PV 03.01). This contains:

- a list of the statutory principles and guidelines that have to be observed
- signatory rules (internal powers)
- procedures (schematic) of proper and simplified proceedings
- checklists for various types of installation (*inter alia*, including lines)
- dossier rules
- guide to estimating the value of installations
- various documents concerning mobile communications installations
- addresses of the responsible cantonal offices and federal contact offices.

In our view, adherence to these procedural steps ensures that the relevant regulations are adhered to.

2. Acceptance of installations (acceptance inspection)

a. The acceptance inspection procedure

Newly-established or altered heavy current installations are accepted by the EStI within the framework of an inspection. In the case of overhead lines, particular checks are performed:

- to verify that the installation has been established in accordance with the plans
- on lines
- on supporting structures
- on distances (to the ground, trees, buildings and bodies of water)
- on crossing / parallel routes

An inspection report has been drawn up since 2002. This report documents adherence to the regulations, and also records which documents still have to be submitted and which measures still have to be taken. Deadlines are imposed and monitored for these outstanding matters.

b. Delegation of responsibilities?

aa. Starting situation

In the year 1998, a strict separation was implemented at the SEV between the Association's Heavy Current Inspectorate and the Federal Inspectorate for Heavy Current Installations in its capacity as the special office of the SEV with public duties (for further details of the situation prior to this date, see the company brochures issued by the Heavy Current Inspectorate [approx. 1995]). This led to a clear separation in terms of personnel. At the same time, however, it also led to staff shortages at the EStI and excess capacity at the SEV's Network and Installation Department, which up until then had also been responsible for corresponding inspection duties. As a consequence of this situation, on 22 February 2002, the EStI placed an "implementation commission for inspection tasks" with the SEV. The commission was defined as follows for the year 2002: "Acceptance inspections of electrical installations for which planning approval has been granted, 4,000 h at CHF 150.00/h." In order to draw a distinction between the activities of the EStI and the SEV, reference was made to the "instructions concerning the respective separation of activities between the EStI and the SEV BER-EA and the ASE in the field of installation inspections" of 17 December 2001. These instructions declare that the SEV is responsible for the acceptance inspections in cases where a consultancy and inspection agreement has been concluded between the SEV and the works in question; the EStI retains responsibility for works or installations for which no such agreement has been concluded. The current model agreement contains *inter alia* the "provision of consultancy services and inspections of electrical installations on the basis of the Electricity Act (SR 734.0) and its implementation decrees." The scope of the inspection and consultancy responsibilities are described in Fig. 4 *inter alia* as follows

“a) Inspection of high-voltage and low-voltage installations:
 - Inspections in accordance with the Heavy Current Ordinance, excl.
 project approvals

...

c) Senior supervisory authority

The senior supervisory duties of the Federal Heavy Current Inspectorate (EStI) are included in the agreement. An inspector from EStI will perform these duties and will charge the corresponding fee directly to Electrosuisse.”

At the meeting of 6 November 2003, the EStI representative explained that the aforementioned Fig. 4 a referred only to inspections conducted in accordance with Art. 20 EleG or Art. 17 - 19 of the Heavy Current Ordinance and Art. 135 f. LeV: that is to say those inspections which the installation owners are required to perform themselves. The content of Fig. 4 c, by contrast, was (solely) the compensation for the execution of the senior supervisory duties; this compensation was charged by Electrosuisse and then forwarded to the EStI. The representative explained that it was not the intention of Fig. 4 to assign responsibilities, as was specifically shown by Sentence two. The actual inspection function was retained by the EStI inspectors.

bb. Preconditions for the delegation of powers

Established teaching and practice assume that administrative powers allocated by law to a specific authority cannot be delegated (Fritz Gygi, Verwaltungsrecht, Bern 1986, p. 67). Even if one wanted to relax this strict rule, then at the very least this would call for a statutory framework making express reference to the delegation or sub-delegation; in this respect, the delegation would require an authorisation in a form which was at least equivalent to that in which the original responsibility was established (Gygi, p. 67).

cc. Concrete case

aaa. Delegation of responsibilities

Art. 21 EleG determines that the inspection of low current and heavy current installations is assigned to an inspectorate appointed by the Federal Council. In implementing this provision, the Federal Council appointed the Heavy Current Inspectorate as the supervisory and inspection *authority* in Art. 1 of the Heavy Current Inspectorate Ordinance, and equipped this Inspectorate with the necessary decision-making powers (cf. Art. 9 Heavy Current Inspectorate ordinance). The EStI is a special office of the SEV (or Electrosuisse) by force of express

statutory regulation, with its own account. For its part, the EStI is subject to the supervision of the UVEK Department.

In addition to the statutory arrangement, the UVEK has concluded a contractual agreement in accordance with the statutory regulations (Art. 1 Para. 2 Heavy Current Inspectorate Ordinance) with the EStI. This expressly determines that the SEV operates a heavy current inspectorate as an independent office with its own account on behalf of the federal government; in this respect, the EStI is “a department of the SEV with decision-making powers and is entrusted with public responsibilities” (Art. 1 Para. 2 of the Agreement between the UVEK and the SEV). The agreement states that the SEV may also entrust tasks to the EStI (subject to the approval of the UVEK) which are not the subject of the agreement (Art. 1 Para. 3 of the aforementioned agreement); by contrast, however, no provision is made for the tasks of the EStI to be sub-delegated to the SEV, and for statutory regulatory reasons it would also not be possible to make such a provision. Without doubt, therefore, the EStI is consequently not permitted to delegate its supervisory powers.

bbb. Permitted use of implementation support?

In view of the relevant agreements, the EStI demonstrably “merely” delegated the powers of implementation. This gives rise to the question of whether the duty to implement the supervision within the meaning of the electricity legislation constitutes a public task or a so-called administrative support activity – which may essentially also be performed by private entities not previously specified by the law. This is because official bodies are provided with administrative leeway in this area, within which they may select the most cost-effective, efficient, politically as well as socially acceptable approach to performing their responsibilities, taking social, economic, political and financial circumstances into account.

In view of the statutory bases, it is clear that the supervision over electrical installations *itself* constitutes the public responsibility; Art. 2 of the Heavy Current Inspectorate Ordinance states who is required to perform this execution responsibility. This leaves no leeway which would enable the execution responsibility to then be separated from a “practical” execution; the responsibility cannot be further subdivided, and must be performed by the office specified for this purpose by law, and with which corresponding contractual administrative agreements have been reached. These do not permit any further delegation.

dd. Summary

In the view of the authors, the delegation of supervisory responsibilities by the EStI to the SEV or to Electrosuisse, as described in the letter of 22 February 2002, is inadmissible. Acceptance inspections of new or altered heavy current installations performed by Electrosuisse cannot be considered inspections within the meaning of Art. 13 VPeA.

c.

According to information provided over the telephone by Mr Dario Marty (Project Approvals EStI) on 4 November 2003, the assignment of supervisory and inspection powers does not apply to high-voltage lines; these are accepted solely by EStI inspectors. This statement and the available reports concerning acceptance protocols (with respect to the inspection of the 380-kV line Amsteg-Mettlen) indicate that in the field of high-voltage lines, acceptance lies exclusively in the hands of the EStI. The authors have been unable to clarify whether this has always been the case; further investigations would be necessary to clarify this point.

3. Summary of the general exercise of preventative inspections

Documents available to the authors indicate that the EStI does indeed fulfil its preventative inspection responsibilities in conjunction with the planning approval decisions and the acceptance of the newly-established or altered installations within the 220/380-kV field. To the extent that the acceptance of heavy current installations beyond the high-voltage grid is generally contractually delegated to third parties, for example to Electrosuisse, the authors consider this to be inadmissible.

4. Lukmanier line and San Bernardino line in particular

The acceptance reports drawn up by the EStI concerning the Lukmanier line were made available to the authors (reports of 30 May and 16 July 2002). These show that the corresponding line sections were indeed subjected to a systematic inspection. In particular, the adherence to distance regulations was checked. The reports also specify the further measures and documents required from the owner of the installation. The reports are effectively documented and fulfil the statutory control obligations within the meaning of Art. 13 VPeA.

B. SUPERVISORY INSPECTIONS

1. Periodic supervision

a. Inspections performed by the EStI

On the basis of the questioning of the responsible individuals at EStI of 29 October 2003 and the written information provided by EStI of 1 November 2003, *inspections conducted at the operators of high-voltage grids* are performed within the framework of the supervision of ongoing projects. As a rule, ongoing projects are consequently the object of such inspections. Random checks of inspection reports are performed, and discussions are held with the individuals responsible for the construction of the line. Within the framework of the supervision conducted with respect to operations, the safety concept (scenarios, switching concepts) of the respective plant are inspected; documents are examined in situ, without copies thereof being made. Defects ascertained in the plants are reported orally, while serious deficiencies are reported in writing; the rectification of these defects and deficiencies is verified at the time of the next inspection. While written inspection reports are not drawn up, it is planned to introduce such written reports during the course of the year 2004.

In the case of *smaller electricity utility companies* with whom there are no continuous contacts in conjunction with ongoing projects, actual inspections are conducted and separately documented.

A further source of information is the EStI's inspection of the inspection reports drawn up within the framework of the inspection and consultancy agreements concluded between a large number of the largest electricity utility companies and Electrosuisse within the meaning of Art. 20 EleG, Art. 19 Heavy Current Ordinance and Art. 136 LeV. The EStI performs random checks on these reports.

b. Contractual delegation of supervisory inspection?

aa.

As already detailed under lit. A/2/b above, the EStI has issued an execution commission to SEV/Electrosuisse to perform acceptance inspections in the case of those installations with whose owners Electrosuisse has concluded a corresponding consultancy and inspection agreement. However, according to its wording, the instruction issued by the EStI on 17 December 2001 also assigns the actual supervisory inspection function to Electrosuisse (supervision of high-voltage installations), once again subject to the proviso that a contractual ar-

rangement has been reached with the installation owner. However, this contrasts with the interpretation of the consultancy and inspection agreements made by Electrosuisse (lit. A/2/b/aa above), whereby the corresponding agreements merely assign the internal inspections conducted by the installation owners. In the case of those installations whose owners have not concluded agreements with Electrosuisse, the EStI retains its responsibility as the supervisory authority.

bb.

As already shown in detail, the authors do not consider the delegation of the supervisory powers of the EStI to a third party to be legally possible. Inspections conducted within the framework of the contractual fulfilment of Electrosuisse are purely private by nature, and cannot free the EStI from its supervisory responsibilities.

cc.

The consultancy and inspection agreements concluded between the owners of the Lukmanier line, the San Bernardino line and Electrosuisse have been made available to the authors. These are partially based on a model agreement that is no longer used (EGL agreements); the content of these agreements is the assignment of the technical safety consultation and the obligatory inspections of the heavy current installations to the Heavy Current Inspectorate at SEV. The contract does not touch upon the responsibilities of the EStI. The term “obligatory inspection” used in this context refers to inspections conducted by the installation owners in accordance with Art. 20 ELeG, Art. 17 – 19 of the Heavy Current Ordinance and Art. 135 f. LeV.

By contrast, the consultancy and inspection agreement concluded between Atel Versorgungs AG (AVAG) and the SEV is based on the current model agreement already mentioned. However, the important difference in this case is that the “senior supervisory responsibilities” of the EStI (Fig. 4 c model agreement) are not actually mentioned. In the sense of the instruction issued by the EStI on 17 December 2001, this can be taken to mean that no supervisory functions are to be assigned, due to the absence of a corresponding contractual provision. This is the assumption made by the authors in the following.

With respect to the San Bernardino line, supervision is in our view generally retained by the EStI, while in view of the contractual situation the situation in the case of the Lukmanier line is unclear.

c.

In accordance with information provided over the telephone by Mr Dario Marty (Project Approvals EStI) on 4 November 2003, the supervisory and inspection powers over high-voltage lines were exercised exclusively by inspectors from EStI. This statement corresponds to the contractual interpretation described under lit. b/cc.

2. Event-related inspections

Within the framework of its event-related inspection remit, the EStI is obliged to respond to current events or notifications issued by installation owners (cf. in this respect the extensive Fig. III/H/2/b). Due to the limited time available to the authors, the present report does not examine whether such duties were indeed properly exercised in recent years.

3. Summary of the general exercise of supervisory inspections by the EStI

The major electricity utility companies, consequently including the owners of high-voltage grids, are in permanent contact with the EStI. In particular, newly-established or altered installations are subjected to acceptance procedures on an ongoing basis, and meetings are likewise held to discuss current projects. Under these circumstances, the EStI decided not to conduct special periodic inspections “without cause”, and instead exercised its general inspection responsibilities within the framework of the visits brought about by special events (examination of the periodic inspection reports; examination of the installations beyond the framework of the components being subjected to acceptance procedures, etc.). In this sense, the EStI cannot be accused of having been in dereliction of its duty to conduct periodic or event-related inspections. In the view of the authors, however, insufficient attention has been focused to date on the documentation of the inspection activities. For inspections to be effective, they also have to be demonstrable; this is not the case with the present documentary procedures. In addition, greater emphasis should be placed on the clear separation between the contractual responsibilities of Electrosuisse and the inalienable supervisory responsibilities of the EStI. In the view of the authors, the contractual formulations should be reviewed.

4. The Lukmanier line and the San Bernardino line in particular

The EStI is in permanent contact with the operators of the Lukmanier line and the San Bernardino line. This meant, as mentioned under Fig. 3, that the accep-

tance of new or altered installations was performed on a continuous basis. Within the framework of these acceptance procedures, further parts of the respective installations were also inspected. As far as the relevant documentation is concerned, that already mentioned under Fig. 3. is available; there is a lack of simple documentary proof of which inspection actions were actually performed. This matter should be clarified, as should the problems already mentioned concerning the various agreements reached in the triangle between Electrosuisse, the installation owners and the EStI.

Baden, 10 November 2003