Baltex Fire 2000 5 - 9 June Kuopio - Finland

Prescribed burning and forest fire exercise in Heinävesi on 7 June 2000

Time 7 June 2000 from 12.00 to 17.30
Place Hyövynniemi, Heinävesi

Exercise programme

13.30	Arrival
13.45	Presentation of the target and preparation for the ignition
14.00	**Prescribed burning**
14.15	Presentation of prescribed burning techniques and methods during the burning
14.45	The final stage of prescribed burning - counter-fire
15.00	**Fire-fighting**
15.15	Fire-fighting by fire-fighting squads
16.00	Aerial fire-fighting
17.00	The demonstration ends

The exercise will demonstrate the following:

- prescribed burning of a nature reserve: an area of 12 hectares will be burnt out
- fire-fighting techniques applied to and equipment used in forest fires in Finland
- aerial forest fire-fighting
- aerial forest fire-fighting equipment used in Poland and Finland

The Finnish Forest and Park Service and the fire brigades in Heinävesi and in nearby areas will be in charge of the practical implementation of the exercise. The aerial fire-fighting equipment to be used in the exercise is the equipment used in Finland and Poland.

Project Secretary Timo Heikkilä from the Ministry of the Interior will lead the exercise. District Chief Fire Officer Erkki Asikainen from the City of Varkaus and the Chief Fire Officer of the Municipality of Heinävesi, Raimo Ikonen, will lead the fire-fighting squads of different fire brigades. Jari Mattila from the Forest and Park Service will be in charge of the prescribed burning. The leader of the aerial fire-fighting squad will be Fire Squad Leader Pekka Salmi, and Sergeant Antero Hoffren from the Heinävesi District Police will lead the police squad.

The participants in the exercise comprise 25 fire-fighting squads from different fire brigades, 3 squads from the police, 2 ambulance service units, the Petrozavodsk fire-fighting squad from the Republic of Karelia, Russia, the forest fire class of the Finnish defence association Maanpuolustusyhdistys, the Road Administration and the women's fire association Palokuntanaiset.

Aircraft used in the exercise:

4 Finnish fire-fighting aircraft (modified fertilising machines)
2 heavy helicopters (the Frontier Guard and the Air Force)
1 SAR helicopter (Ilmari)
2 Polish fire-fighting aircraft (Dromader)
1 small aircraft leading the aerial fire-fighting demonstration

All the roads leading to the scene of the exercise in Hyövynniemi will be blocked off in the morning.

It will not be possible to use one's own car in Hyövynniemi.

Baltex Fire 2000 5 - 9 June Kuopio - Finland

Kulotus- ja metsäpaloharjoitus Heinävedellä

Aika 7.6.2000 kello 12.00 – 17.30
Paikka Heinävesi, Hyövynniemi

Harjoituksen ohjelma

13.30	Saapuminen harjoituspaikalle
13.45	Harjoituskohteen esittely ja valmistautuminen sytytykseen
14.00	**Kulotuksen sytyttäminen**
14.15	Kulotustekniikan ja polttomenetelmän esittelyä, polton edistyessä
14.45	Kulotusvaiheen loppuosuus alkaa – vastatulen syttyäminen
15.00	**Sammutustoiminta käynnistyy**
15.15	Sammutusryhmien sammutustyö käynnistyy
16.00	Lentosammutustoiminta käynnistyy
17.00	Näytös päättyy

Harjoituksessa esitellään:

- luonnosuojelualueen kulotus, kulotettava alue 12 ha.
- metsäpalon sammutusteknikkaa ja kalustoa Suomen oloissa
- lentosammutustoiminnan käyttöä metsäpalojen sammustustyössä
- Puolassa ja Suomessa käytössä olevaa lentosammutuskalustoa

Harjoitus toteutetaan yhteistyössä Metsähallituksen, Heinäveden ja sen ympäristön palokuntien kanssa sekä Suomessa ja Puolassa käytössä olevilla lentosammutuskoneilla.

Harjoituksen johtajana on Timo Heikkilä sisäasiainministeriöstä. Palokuntien sammutusjoukkoja johtaa aluepalopäällikkö Erkki Asikainen Varkaudesta yhteistyössä Heinäveden kunnan palopäällikön, Raimo Ikosen kanssa. Kulotuksen johtajana on Jari Lassila Metsähallituksesta. Lentosammutusyksikön johtajana on paloesimies Pekka Salmi ja poliisin johtajana ylikonstaapeli Antero Hoffren Heinäveden poliisista.

Harjoitukseen osallistuu 25 palokuntien yksikköä, kolme poliisin yksikköä, kaksi sairaankuljetusyksikköä, Venäjän Karjalan tasavallan Petroskoin sammutusyksikkö, Maanpuolustusyhdistyksen metsäpalokurssi, Tielaitos sekä Palokuntanaiset.

Harjoituksessa käytettävät ilma-alukset

4 suomalaista sammutuskonetta (lannoituskoneista modifioituja)
2 raskasta helikopteria (Rajavartiosto ja Ilmavoimat)
1 SAR-helikopteri (Ilmari)
2 puolalaista sammutuslentokonetta (Dromader)
1 pienkone lentosammutustoiminnan johtokoneena

Kaikki harjoitusalueelle Hyövynniemeen johtavat tiet suljetaan yleiseltä liikenteeltä aamupäivän kuluessa

Omien autojen käyttö ei ole mahdollista Hyövynnimellä.

Turvepaloharjoitus Suonenjoella

Aika torstaina 8.6.200 kello 12.00 – 17.00
Paikka Suonenjoki, VAPOn Kurkisuo

Harjoituksen ohjelma

13.00	Seminaarin osanottajat saapuvat Kurkisuolle
13.15	Tuotanoaluueen ja sen palontorjuntajärjestelyjen esittelyä
14.00	Palokuntien varautuminen turvepaloihin
15.00	Kenttäpalo syttyy tuotantoaluella – VAPON sammutusrymän toimintanäytös
15.30	Aumapalo syttyy tuotantoalueella – palokunnan sammutustoiminnan esittely
16.00	Lentosammutusnäytös
16.15	Näytös päättyy

Harjoituksessa esitellään:

- turvetuotannon laajuus ja toiminta Suomessa
- turvetuotannon toteuttaminen ja kalusto
- turvetuotannon paloriskit ja palontorjuntaan varautuminen tuotantoyksikössä sekä yksikön sammutuskalusto ja välineistö työmaalla
- palokunnan varautuminen turvepaloihin ja palokunnan sammutuskalusto
- turveaumapalon alkusammutus tuotantoyksikön omin voimin
- turveaumapalon sammutus palokunnan osalähdön voimin
- turvepalon lentosammustustoimintaa.

Harjoituksen toteuttamisesta vastaa Suonenjoen palolaitos yhteistyössä VAPON, Pelastusopiston sekä lentosammutusyksikön kanssa.

Harjoituksen johtajana on Timo Heikkilä sisäasiainministeriöstä. Suonejoen palolaitoksen yksikötä johtaa palopäällikkö Jukka Koponen. VAPON yksikköjen toiminnasta vastaa Heimo Konkka ja lentosammutusyksikön toiminnasta paloesimies Pekka Salmi.

Harjoitukseen osallistuu VAPON, Kurkisuon tuotantoyksikön sammutusryhmä, kalustoineen, viisi palokuntien yksikköä, lentosammutusyksikkö kolmen ilma-aluksen yksiköllä (johtokone, helikopteri ja sammutuslentokone).

Baltex
Fire 2000 5 - 9 June Kuopio - Finland

BALTEX FIRE 2000
METSÄPALONTORJUNTANÄYTÖS
Heinävesi 7.6.2000

Sisäasiainministeriö, pelastusoasto
Pelastusopisto
Metsäntutkimuslaitos
Metsähallitus
Helsingin yliopisto
Ilmatieteenlaitos
Valtion teknillinen tutkimuskeskus (VTT)
Global Fire Monitoring Center (GMFC)

SISÄASIAINMINISTERIÖ
BALTEX FIRE 2000 METSÄPALONTORJUNTANÄYTÖS 7.6.2000

NÄYTÖKSEN TAVOITTEENA ON ESITELLÄ OSANOTTAJILLE:

1. Metsähoidollisen kulotuksen toteuttaminen,
2. hallittua tulen käsittelyä luonnonmetsän poltossa,
3. metsäpalon sammutustekniikkaa,
4. lentosammutustoimintaa metsäpalojen sammutuksessa,
5. metsäpalojen sammuttamisessa käytettävää kalustoa ja välineistöä,
6. Suomessa ja naapurimaissa käytössä olevaa lentosammutuskalustoa ja ilma-alusten käyttöä sammutustyössä.

AIKA JA PAIKKA:

Näytös järjestetään:
- Keskiviikkona 7.6.2000 klo: 13.30 - 18.00 paikallista aikaa.

Näytöspaikka sijaitsee:
- Itä-Suomen läänissä, Etelä-Savon maakunnassa, Heinäveden kunnan Hyövynniemellä Varkaudesta n. 50 km Joensuuhun päin (vt. 23).
  62 26´9 N ja 28 47´5 E. Polttoala on 12 ha ja maa-alueen omistaa Metsähallitus.
  Tarkempi opastus kohteeseen Heinäveden paloasemalta puh: 017 - 5781 228.

Lentotoiminta paikka sijaitsee:
- Sappu, Suppuniemi, metsäpalolentokenttä (Metsähallitus/Heinäveden palolaitos)
  62 22´4 N ja 28 53´6 E.
- Varalla: (Joensuun lentoasema = Puolalaiset sammutuskoneet)

HARJOITUKSEN TOTEUTUS:

Kohteessa suoritetaan metsähoidollinen kulotus, jota täydennetään polttamalla pystymetsä saarekkeita alueen sisäpuolella. Kulotuksen suunnittelee ja toteuttaa Metsähallitus ja kulotusta johtaa tiimiesimies **Jari Lassila** Varkaudesta. Kulotusalue on 12 ha ja paloaluetta sammutustoiminnan havainnoimiseksi laajennetaan tarpeen mukaan.

Vaikka kulotus on oikeinsuoritettuna turvallinen metsänuudistamistapa, tuli pääsee leviämään sammutustoiminnan havainnoimiseksi kulotusalueelta. Kohteessa aloitetaan alueen palokuntien toimesta pysäyttämisvaihe, jota tuetaan lentosammutustoiminnalla, johon osallistuu johtokoneen lisäksi sammutuskoneita ja helikoptereita Suomesta ja Puolasta.
Sammutusta varten jaetaan toiminta-alue kolmeen (3) kaistaan. Lentokoneiden lasku- ja tankkauspaikat muodostavat oman kaistansa (karttaliite).

ORGANISAATIO:

Sammutustoiminnan johtamista varten perustetaan toiminta-alueen johtokeskus, jonka toimintaa varten pelastusopisto toimittaa käyttöön **O 10** johtoauton.

Toiminta-alueen johtaja:

- Aluepalopäällikkö Erkki Asikainen, Varkaus 0400-182 301

Operaatiopäällikkö:

- Palopäällikkö Raimo Ikonen, Heinävesi 040-548 22 13

Tilannepäällikkö:

- Palomestari Kari Mikkonen, Varkaus 040-545 87 38

Viestipäällikkö:

- Palomestari Jari Pirinen, Varkaus 0400-545 88 76

Lentosammutuksen johtaja: (johtokone)

- Paloesimies Pekka Salmi, Kaarina 0400-781 198

Lentosammutuspäällikkö: (johtokone)

- Lentokapteeni Hannu Aaltio, SM/PO 0500-468 384

Turvallisuuspäällikkö:

- N:o 1 Ylikonstaapeli Antero Hoffren, Heinävesi (yleinen turvallisuus) 0500-185 912
- N:o 2 Apul.palopääl. Pekka Suhonen, Pieksämäki (palokuntien toiminta) 0400-654243
- N:o 3 Projektisihteeri, Timo Heikkilä, SM/PO (lentotoiminta) 040-584 42 74
- N:o 4 Yliluutnantti Harri Vinkka, Puolustusvoimat (metsäpalokurssi) 040-506 75 23

Huolto-muonituspäällikkö:

- Marja Lampinen, Heinäveden palokuntanaiset ry 017-516 619

Tiedotuspäällikkö:

- Pelastusylitarkastaja Harry Frelander, SM/PO 09 - 160 2966

Lennonjohtaja:

- (Sapun metsäpalolentokenttä)

Sammutuskaistan päälliköt:

- N:o 1 Paloesimies Matti Honkanen, Savonlinna 040-547 16 66
- N:o 2 Palopäällikkö Esko Hätinen, Kontiolahti 040-775 31 41
- N:o 3 Palopäällikkö Esa Laukniemi, Joroinen 0400-125 444
- N:o 4 Paloesimies Kauko Rouhiainen, Liperi (Sapun metsäpalolentokenttä) 040-523 98 93
- N:o 4 Palopäällikkö Harri Pöllänen, Kangaslampi (Sapun levähdysa./tankkaus) 0400-126 412

- **Tulkkaus:**
  1. Vladimir Davydov — Venäläinen sammutusauto, kaista n:o 2 040-566 45 99
  2. Olga Davidova — Toiminta-alueen johtokeskus
  4. Ewa Lewandowska, Heinävesi (Puola) — 6.6 ja 7.6.2000
  5. Kalevi Horppu (Venäjä) — Varalla

- **Muu toimintaorganisaatio:**

Heinäveden palolaitos	H 1, H 11+ mpt.pv, H 141	Kaista N:o 1
	H 12	Kaista N:o 1
	p/a Palokärki	Metsähallitus
Pohjois-Heinäveden VPK	H 31, H 35	Kaista N:o 1
	HV 2	Metsähallitus
Jäppilän VPK	JÄ 17+mpt.pv.	Kaista N:o 3
Vihtarin VPK	H 21, H 24	Kaista N:o 2
	H 27	Huolto
Leppävirran palolaitos	L 14	Kaista N:o 1
Pelastusopisto	O 31, O 14	Kaista N:o 2
Karjalan palolaitos (Petroskoi)	Säiliöauto (1+5) ja ambulanssi (1+2)	Kaista N:o 2
Kangaslammin palolaitos	K 14	Kaista N:o 2
	K 17	Huolto
Varkauden pelastuslaitos	p/a Albert Krank / pumppaus	Kaista N:o 3
	V 14	Kaista N:o 1
Joensuun VPK	J 12 + mpt.pv.	Kaista N:o 3
Liperin pelastuslaitos-Viinijär.	LI 21	Kaista N:o 3
Maanpuolustuskoulutus ry	Metsäpalokurssi (Soisalon Liikenne / Bussi)	Kaista N:o 3
Etelä-Savon palokuntanaiset	H 27 / Muonitusryhmät	Huolto
Savonrannan VPK	SA 17, SA 14 (Sapun lentokenttä)	Kaista N:o 4
Liperin pelastuslaitos	LI 14 (Sapun lentokenttä)	Kaista N:o 4
Enonkosken VPK	E 14 (Sapun lentokenttä)	Kaista N:o 4
Joroisten palolaitos	J 12 (Sapun lentokenttä)+Reservi	Kaista N:o 4
Tielaitos	Säiliöauto/varastosäiliö (Sapun lentokenttä)	Kaista N:o 4
Tekninen tsto/S. Mikkonen	Säiliöauto/varastosäiliö (Sapun lentokenttä)	Kaista N:o 4

Varalla:		
Joensuun aluepalolaitos	J 14 / Säiliöauto = Joensuun lentoasema	Joensuu
Joensuun lentoasema	Ilmailulaitos	013-272 7111

Lentosammutus:	Johtokone Cessna 182 Skyline	KoneKorhonen
	Sam.kone 1 Cessna 188 "Agtruck"	"
	Sam.kone 2 Piper PA-36-300 "Brave"	"
	Sam.kone 3 Cessna 188 "Agtruck"	"
	Sam.kone 4 Cessna 188 "Agtruck"	"
	Sammutuskone n:o 1 (Dromader)	Puola
	Sammutuskone n:o 2 (Dromader)	Puola
	Helikopteri Super-Puma	Rajavartiolaitos
	Helikopteri MI - 8	Puol.voimat
	Helikopteri BO-105 "Ilmari"	I-S pel.hel.tuki

Metsähallitus	Kulotuksen suunnittelu, kulotuksen valmistelu ja lupamenettely, kulotuksen toteuttaminen ja johtaminen, sammutusmuodostelmien avustaminen, jälkivartiointi.	
Poliisi	Partioauto (1) Heinävesi partioauto (1) Savonlinna partioauto (1) Savonlinna partioauto (1) LP venepartio (1) LP	(Toiminta-alue), (mt.476 ja mt.477), (vt. 23, Karvion seutu), (reservi), (Kermanjärvi).
Ensiapuvalmius	H 192 H 191	(toiminta-alue), (reservi)
Tekninen toimisto	Kuorma-auto/vesisäiliö	(Sapun lentokentän kastelu) (Helikopterikentän kastelu) (Varastosäiliö)
Tielaitos	Kuorma-auto/vesisäiliö	(Varastosäiliö)
Jätehuolto	Jätehuolto Arokivi	WC:t / harjoitusalue

AIKATAULU:

Maanantai 5.6.2000
- Tiedotustilaisuus klo: 15.00 tiedotusvälineille pelastusopistolla.
  Läsnä: SM:stä Partanen, Frelander, maa-ja metsätalousmin. edustaja, pelastusop. Pajulahti, Virtanen, Heinävesi Ikonen, Suonenjoki Koponen, VAPO:n edustaja, kansainväl.edust. Goldammer.

Tiistai 6.6.2000
- Kulotusalueen ja Sapun lentokentän tarkastus,
- säätiedot ilmatieteenlaitokselta,
- liikennemerkkien ja sulkupukkien asentaminen:
  * mt. 477, Särkeläntie ja
  * Sapun metsäpalolentokenttä,
- Letkulinjojen rakentaminen harjoitusalueelle,
- sammutusyksikkö saapuu Petroskoista pelastusopistolle klo: 15.00 mennessä
- tarjoilukatoksen asentaminen harjoitus/näytöspaikalle (Etelä-Savon pelastusalanliitto ry),
- kemiallisten käymälöiden asentaminen harjoitus/näytöspaikalle (Jätehuolto Arokivi).

Keskiviikko 7.6.2000

- Sapun metsäpalolentokentän ja helikopterikentän (urheilukenttä) kastelu/tekninen tsto.
- Loppuvalmennus pelastusopistolla klo: 08.30,
- Särkeläntien jatkeena oleva Hyövynniemen metsäautotie suljetaan, paikalle järjestetään puomituksen lisäksi vartio ja alueen metsäautotiet tarkastetaan. Tehtävän suorittaa Vihtarin VPK n. klo: 09.00 alkaen,
- näytös/harjoituksen varoittamiseen tarkoitettujen liikennemerkkien suojat poistetaan, ja opastuskyltit sijoitetaan paikoilleen. Tehtävän suorittaa Heinäveden palolaitos ja Vihtarin VPK,
- Petroskoin sammutusauto ja pelastusopiston yksiköt ajavat kolonamuodostelmana Heinävedelle, jossa kokoontuminen Heinäveden paloasemalla (Maljalantie 1) klo: 12.00,
- Metsähallitus siirtää kulotukseen tarvittavan kaluston ja miehistön kohteeseen maanteitse/ ja tarvittaessa p/a Palokärjellä ja HV 2:lla vesitse Kermanjärven yli klo: 09.00 alkaen,
- monitoimitalo (Kenttätie 6) siirtyy klo: 11.00 alkaen maanpuolustuskoulutus ry:n käyttöön perustamispaikaksi, jossa reserviläisten (metsäpalokurssi) kokoontuminen, kirjaaminen, pukeutuminen ja varustaminen sammutusmuodostelmaksi. Muodostelma siirtyy klo: 12.00 joukkokuljetuksena Hyövynniemeen. Monitoimitalo on muodostelman peseytymis/puhdistumispaikkana harjoituksen jälkeen (kuljetus Soisalon liikenne Oy:n bussilla).
- Lehdistö kokoontuu Vihtarin koulu/paloasemalle Savonrannantie 2: een, josta bussikuljetus harjoitusalueelle klo: 13.15. Ennakkoilmoittautumiset tehtävä- ja ilmailuluvat saa SM:n pelastusosastolta. Sähköisen viestinnän ulkolähetysautojen sijoituksesta otettava yhteys Heinäveden kunnan palopäällikkö Raimo Ikoseen puh: 040 - 548 22 13 tai 017 - 5781 227.
- Kutsuvieraat kokoontuvat Vihtarin koulu/paloasemalle Savonrannantie 2:een, josta bussikuljetus klo: 13.15.

Suoritusyksiköiden kokoontuminen seuraavasti:

Organisaatio:	**Kokoontumispaikka:**	**Aika:**
* Heinäveden palolaitos	Heinäveden paloasema	klo: 11.30
* Pohjois-Heinäveden VPK	Heinäveden paloasema	klo: 12.00
* Vihtarin VPK	Vihtarin koulu/paloasema	klo: 12.00
* Pelastusopisto	Heinäveden paloasema	klo: 12.00
* Karjalan palolaitos (Petroskoi)	Heinäveden paloasema	klo: 12.00
* Joensuun VPK	Vihtarin koulu/paloasema	klo: 12.00
* Liperin pelastuslaitos-Viinijär.	Vihtarin koulu/paloasema	klo: 12.00
* Savonrannan VPK	Vihtarin koulu/paloasema	klo: 12.00
* Liperin pelastuslaitos	Vihtarin koulu/paloasema	klo: 12.00
* Enonkosken VPK	Vihtarin koulu/paloasema	klo: 12.00
* Joroisten palolaitos	Heinäveden paloasema	klo: 12.00
* Leppävirran palolaitos	Heinäveden paloasema	klo: 12.00
* Kangaslammin palolaitos	Heinäveden paloasema	klo: 12.00
* Jäppilän VPK	Heinäveden paloasema	klo: 12.00
* Varkauden pelastuslaitos	Heinäveden paloasema	klo: 12.00

* Heinäveden sairaankuljetus ky	Heinäveden paloasema	klo: 12.00
* Heinäveden- ja Etelä-Savon palokuntanaiset	Vihtarin koulu/paloasema	klo: 09.00
* Poliisi	Heinäveden poliisiasema	klo: 11.00
* Metsähallitus	Hyövynniemi	klo: 09.00
	Kulotuksen aloitus	**n. klo: 13.00**
* Tielaitos	Heinäveden paloasema	klo: 12.00
* Tekninen toimisto, S.Mikkonen	Sappu, metsäpalolentokenttä	klo: 07.00
	Urheilukentän kastelu	klo: 08.30
	Heinäveden paloasema	klo: 12.00
* Maanpuolustuskoulutus ry	Monitoimitalo, Kenttätie 6	klo: 10.00
* Soisalon Liikenne Oy	Monitoimitalo, Kenttätie 6	klo: 11.30

(Lentosammutusmuodostelmista erillinen aikataulu).

- Kulotusalue ja lähialueet tarkastetaan klo: 11.00 Vihtarin VPK: n toimesta, klo: 12.00 poliisin toimesta ja klo: 12.50 rajavartiolaitoksen Super-Pumalla.

- Baltex Fire 2000 seminaariväen ohjelma aikataulu:
  * klo: 11.30 lähtö pelastusopistolta. (Reitti Kuopio-Leppävirta-Heinävesi n. 1,5 h),
  * klo: 12.45 saapuminen Heinävedelle. Kahvitarjoilu (Hotelli-ravintola Gasthaus),
  * klo: 13.15 matka jatkuu harjoitus/näytöspaikalle Hyövynniemeen,
  * klo: 14.05 H-hetki (kohteessa palokuntanaisten tarjoilua),
  * klo: 17.15 siirtyminen ruokailuun ja iltapäivän oppitunneille
    - Hotelli Gasthaus, Askeltie 2, Heinävesi puh: 017-562 411
  * klo: 18.45 siirtyminen luennoille
    (Heinäveden kunnan tervehdys, kunnanvaltuuston puh.joh. Ilkka Paatero)
    - Koulukeskus, Kenttätie 1C puh: 017-5781 281
  * klo: 21.00 paluu takaisin Kuopioon
    - Pelastusopisto, Hulkontie 83 puh: 017-307 111

- Rajavartiolaitoksen Super-Puma saapuu Heinävedelle klo: 11.00. Välilaskupaikka sijaitsee Heinäveden keskustan (62 25´6 N ja 28 37´8 E) urheilukentällä, joka Heinäveden palolaitoksen toimesta eristetään. Samaa laskeutumispaikkaa voi käyttää BO-105 "ILMARI". Puolustusvoimien MI-8:lle varataan laskeutumisalue monitoimitalon pysäköintialueelta. Urheilukentältä Hyövynniemen kohteeseen on matkaa 8 km.

Kulotus- sammutusnäytös H-hetki klo: 14.05 (Valmistelut alkavat klo: 13.00)

- Kulotusnäytös	klo: 14.05 - 14.45
- Hallitun tulen käytön esittely / pystymetsän polttovaihe	klo: 14.45 - 15.15
- Maavoimien sammutusnäytös	klo: 15.00 - 16.00
- Kulotuksen "karkaaminen" metsäalueelle	klo: 16.00
- Lentosammutustoiminta käynnistyy	klo: 16.05
- Suomalaisten lentosammutusosuus käynnistyy	klo: 16.10
- Suomalaiset lentosammutuskoneet poistuvat	klo: 16.40
- Helikopterit saapuvat paikalle	klo: 16.45
- Puolalaiskoneen sammutusnäytös	klo: 16.50
- NÄYTÖS ON PÄÄTTYNYT	klo: 17.15
- Vartiointivaiheen aloitus, metsähallitus	

NÄYTÖKSEN LENTOKONEET HARJOITUKSEN JÄLKEEN NÄHTÄVINÄ SAPUN METSÄPALOLENTOKENTÄLLÄ.

HELIKOPTERIT NÄHTÄVINÄ HEINÄVEDEN KESKUSTAN URHEILUKENTÄLLÄ JA SEN LÄHEISYYDESSÄ.

- Näytös päättyy n. klo: 17.15 ja luovutetaan metsähallituksen jälkivartioitavaksi. Rajavartiolaitoksen Super-Puma tekee varmistukset ja mahdolliset kulotusalueen rajausten paikkaukset tarkastuslennon yhteydessä.

Metsäpaloseminaari osallistujavaltiot

Suomi, Venäjä, Viro, Latvia, Liettua, Puola, Saksa, Tanska, Ruotsi, Norja

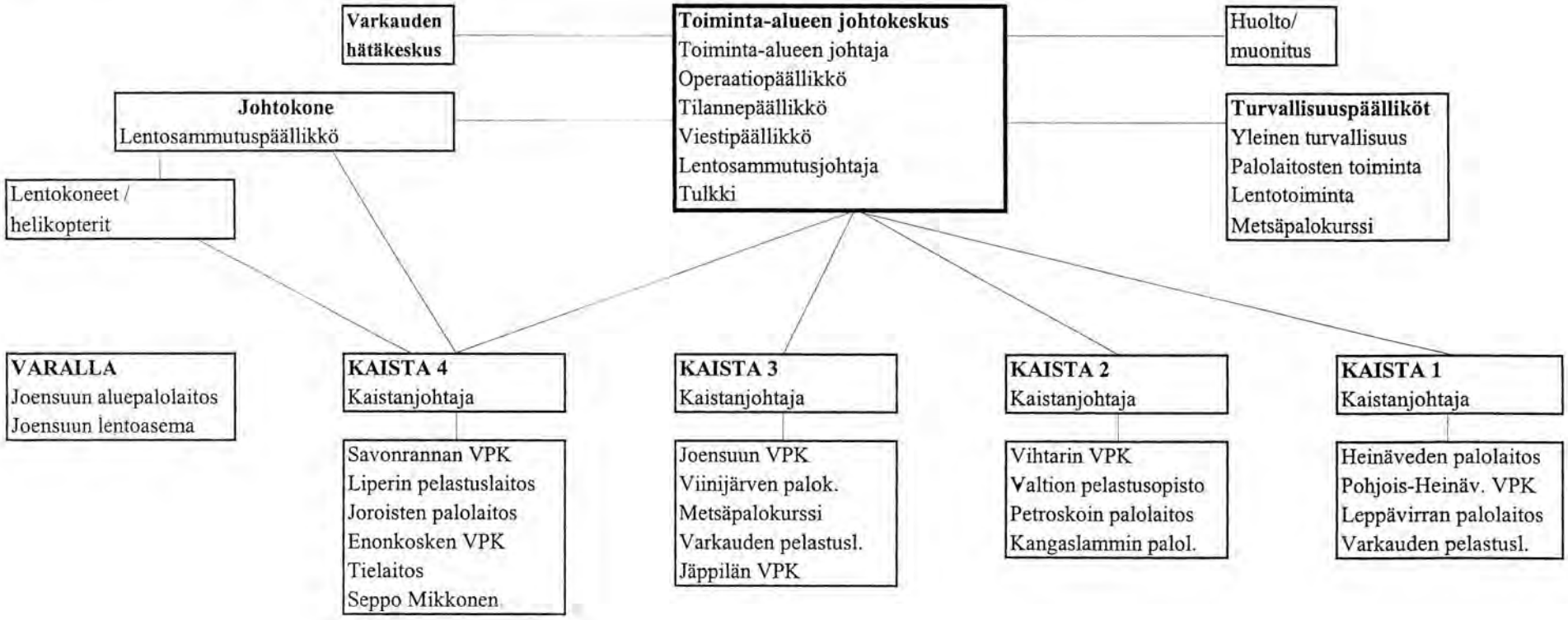
Tarkkailijavaltiot

Valko-Venäjä, Islanti, Alankomaat, Englanti

OSALLISTUJAT:

	Määrä:
BALTEX FIRE - 2000 metsäpaloseminaari	100
	100
Heinäveden palolaitos	18
Vihtarin VPK (Heinävesi)	20
Pohjois-Heinäveden VPK (Heinävesi)	15
Varkauden pelastuslaitos	10
Kangaslammin palolaitos	3
Leppävirran palolaitos	2
Pelastusopisto	8
Karjalan palolaitos (Petroskoi)	6
Joensuun VPK	6
Liperin pelastuslaitos (Kirkonkylä)	3
Liperin pelastuslaitos (Viinijärvi)	6
Savonrannan VPK	3
Jäppilän VPK	6
Enonkosken VPK	2
Joroisten palolaitos	3
Savonlinnan palolaitos	1
Kontiolahden palolaitos	1
Pieksämäen palolaitos	1
	114
Maanpuolustuskoulutus ry	40
Savonlinnan kihlakunta (Poliisi)	8
Liikkuva poliisi	4
Heinäveden sairaankuljetus ky	2
Metsähallitus	15
Tielaitos	1
Heinäveden kunta/tekninen toimisto/S. Mikkonen	1
Heinäveden kunta/ravintokeskus	8
Heinäveden- ja Etelä-Savon palokuntanaiset	20
Tulkit	5
Jätehuolto Arokivi	1
Kone Korhonen Oy	6
Rajavartiolaitos	5
Puolustusvoimat	5
	121
YHTEENSÄ	**335**

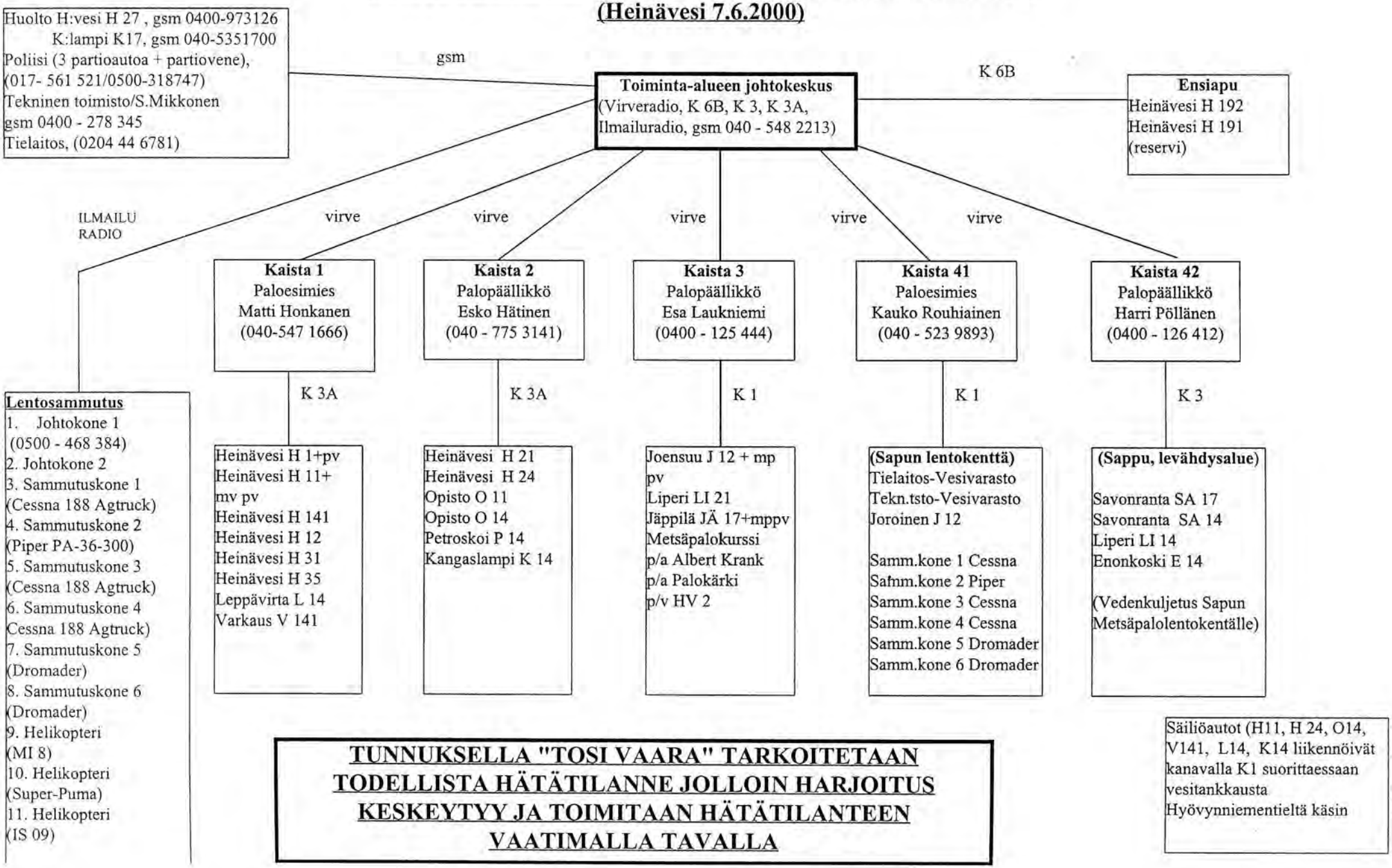
Baltex Fire 2000
Metsäpalontorjuntanäytös Heinävedellä 7.6.2000
SUORITUSORGANISAATIO



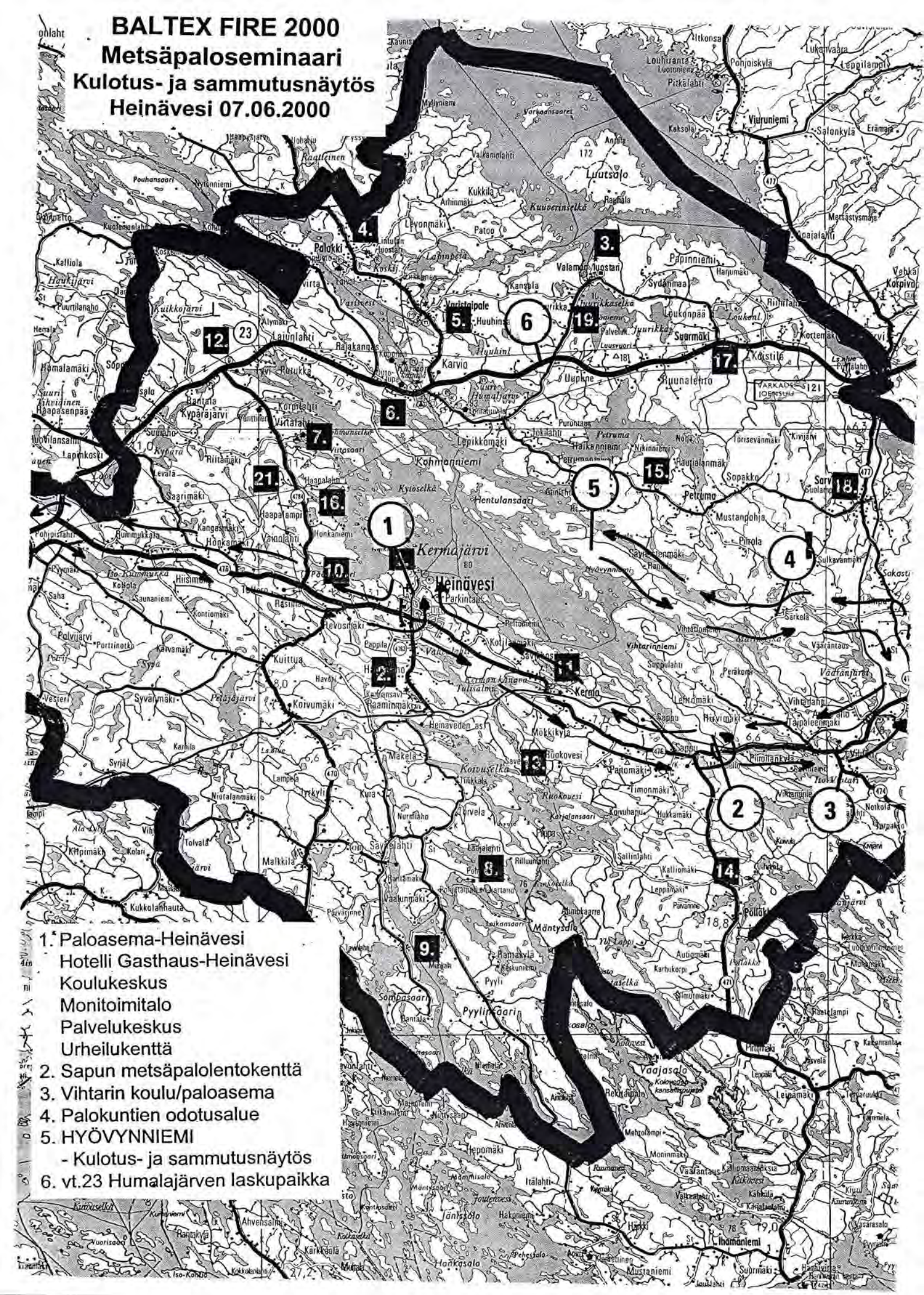
BALTEX FIRE 2000
RADIOLIIKENNETUNNUKSET

Tehtävä	Nimi	Radioliikenne-tunnus
Toiminta-alueen johtokeskus		TOJE
Toiminta-alueen johtaja	Aluepäällikkö Erkki Asikainen	PALO 1
Operaatiopäällikkö	Palopäällikkö Raimo Ikonen	PALO 2
Tilannepäällikkö	Palomestari Kari Mikkonen	PALO 3
Viestipäällikkö	Palomestari Jari Pirinen	VIESTI 1
Lentosammutuksen johtaja (Johtokone 1)	Paloesimies Pekka Salmi	LENTO 1
Lentosammutuspäällikkö (Johtokone 2)	Lentokapteeni Hannu Aaltio	LENTO 3
Turvallisuuspäällikkö (Yleinen)	Ylikonstaapeli Antero Hoffren	TURVA 1
Turvallisuuspäällikkö (Pelastustoimi)	Apul.palopääll. Pekka Suhonen	TURVA 2
Turvallisuuspäällikkö (Lentotoiminta)	Projektisihteeri Timo Heikkilä	TURVA 3
Turvallisuuspäällikkö (metsäpalokurssi)	Yliluutnantti Harri Vinkka	TURVA 4
Huolto-muonituspäällikkö	Marja Lampinen	HUOLTO 1
Tiedotuspäällikkö	Pelastusylitarkastaja Harry Frelander	
Sammutuskaista 1:n päällikkö	Palopäällikkö Matti Honkanen	KAISTA P1
Sammutuskaista 2:n päällikkö	Palopäällikkö Esko Hätinen	KAISTA P2
Sammutuskaista 3:n päällikkö	Palopäällikkö Esa Laukniemi	KAISTA P3
Sammutuskaista 4:n päällikkö	Paloesimies Kauko Rouhiainen	KAISTA P4
Sammutuskaista 5:n päällikkö	Palopäällikkö Harri Pöllänen	KAISTA P5
Tulkki	Vladimir Davydov	TULKKI 1
Tulkki	Olga Davidova	TULKKI 2
Johtokone1		KOTKA
Johtokone 2	Cessna 182 Skyline	ALBATROSSI
Sammutuskone 1	Cessna 188 "Agtruck"	SAMMUTUS 1
Sammutuskone 2	Piper PA-36-300 "Brave"	SAMMUTUS 2
Sammutuskone 3	Cessna 188 "Agtruck"	SAMMUTUS 3
Sammutuskone 4	Cessna 188 "Agtruck"	SAMMUTUS 4
Sammutuskone 5	Dromader (Puola)	FLY 1
Sammutuskone 6	Dromader (Puola)	FLY 2
Helikopteri (Puolustusvoimat)	MI 8	HEKO 1
Helikopteri (rajavartiolaitos)	Super-Puma	HEKO 2
Helikopteri (Pelastuslaitos)	Pelastushelikopteri	IS-09

Baltex Fire 2000 metsäpalotorjuntanäytöksen viestiliikennekaavio (Heinävesi 7.6.2000)



BALTEX FIRE 2000
Metsäpaloseminaari
Kulotus- ja sammutusnäytös
Heinävesi 07.06.2000



1. Paloasema-Heinävesi
   Hotelli Gasthaus-Heinävesi
   Koulukeskus
   Monitoimitalo
   Palvelukeskus
   Urheilukenttä
2. Sapun metsäpalolentokenttä
3. Vihtarin koulu/paloasema
4. Palokuntien odotusalue
5. HYÖVYNNIEMI
   - Kulotus- ja sammutusnäytös
6. vt.23 Humalajärven laskupaikka

BALTEX FIRE 2000
Metsäpaloseminaari
Kulotus- ja sammutusnäytös
Heinävesi 07.06.2000

HEINÄVESI
KIRKONKYLÄ

Koulukeskus
Puh: 017 - 5781 281
Metsäpaloseminaari / luentotila
alkaen klo: 18.45

Urheilukenttä
Puh: 040 - 58 58 248
Helikopterien laskeutumisalue

Paloasema-Heinävesi
Puh: 017 - 5781 228
Palokuntien kokoontumispaikka

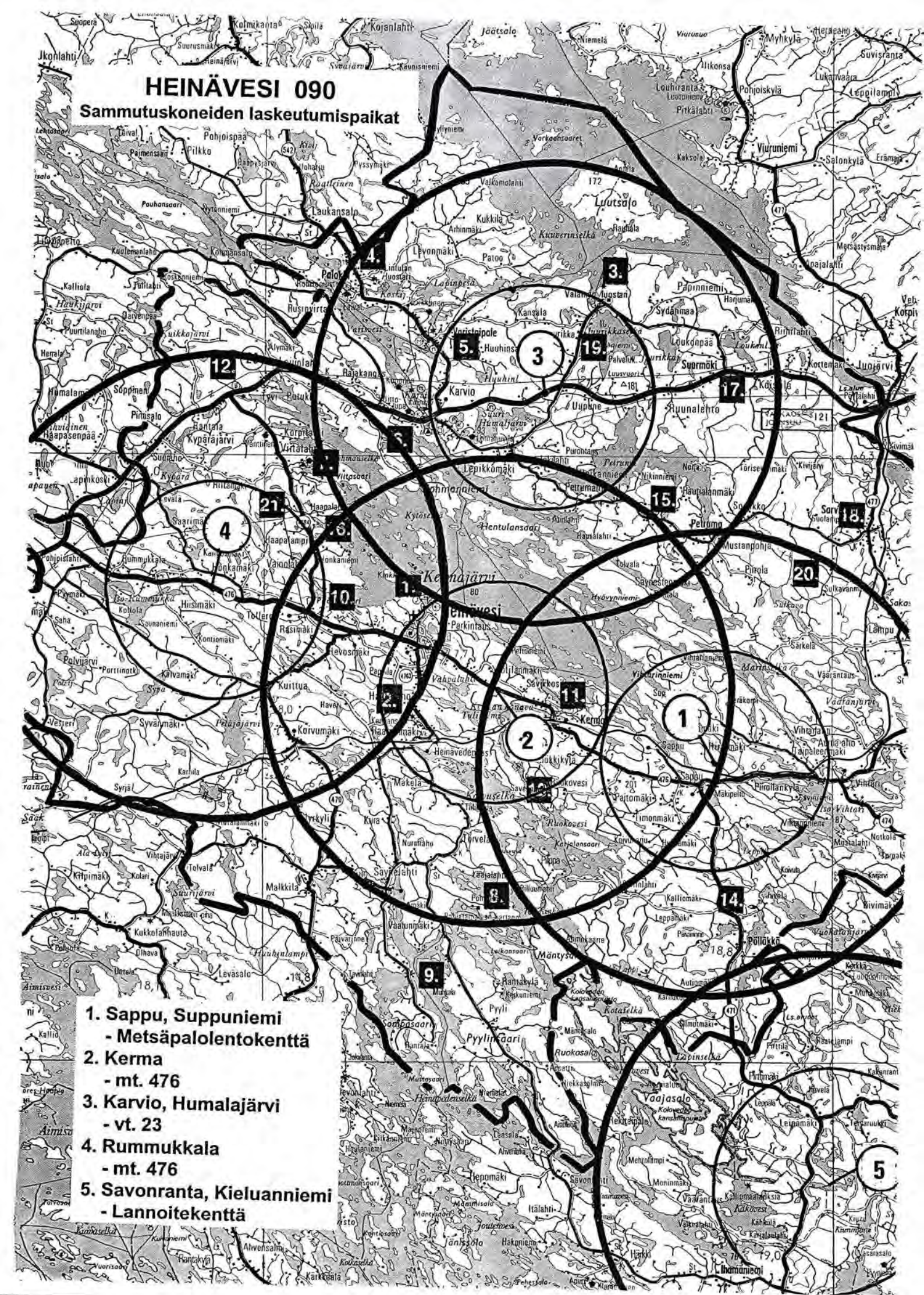
Hotelli-Gasthaus Heinävesi
Puh: 017 - 562 411
Klo: 12.45 Kahvitarjoilu (seminaariväki)
Klo: 17.45 Ruokailu (seminaariväki)

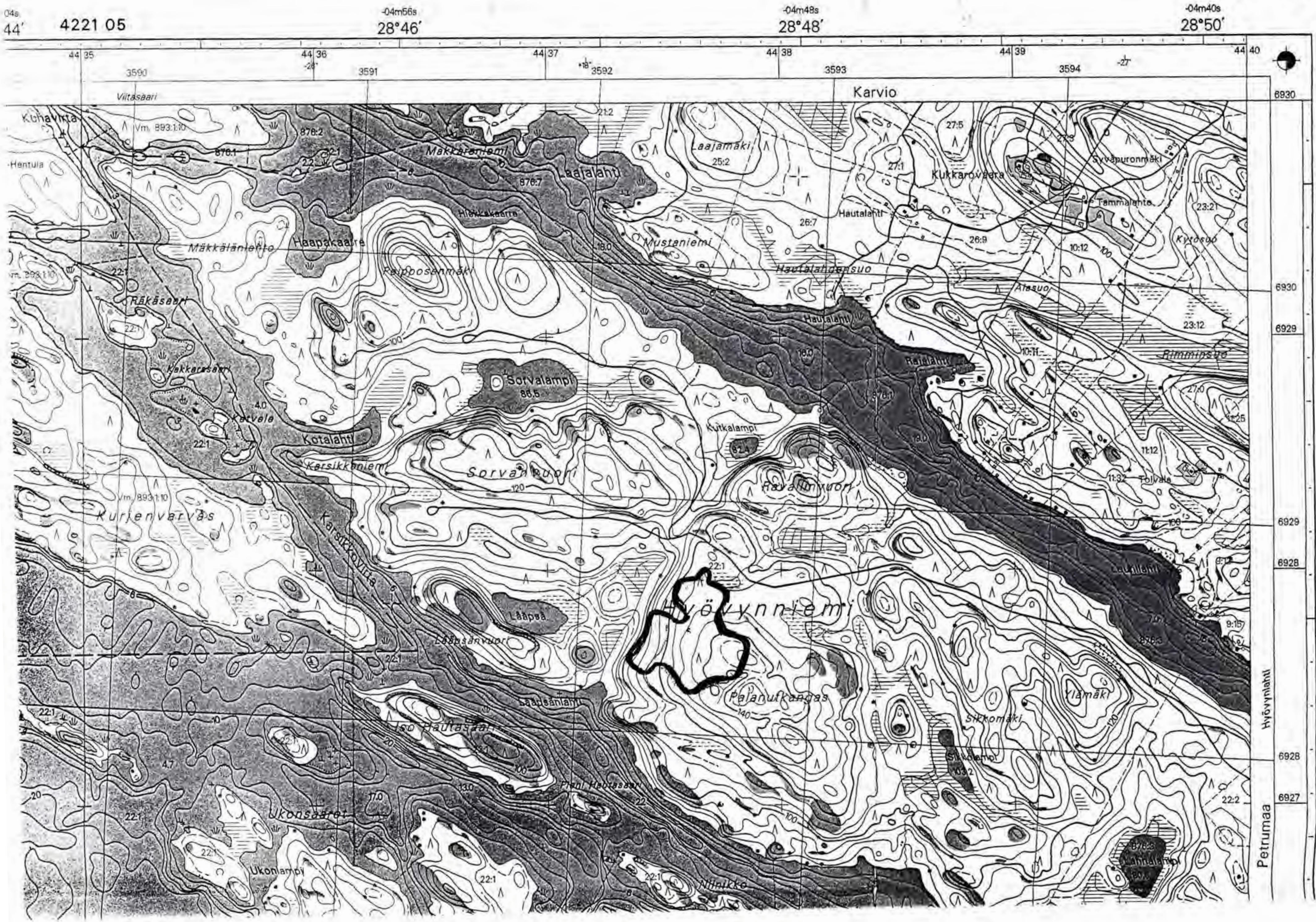
Monitoimitalo
Puh: 040 - 70 76 528
...anpuolustuskoulutus ry
Metsäpalokurssi/perustamispaikka

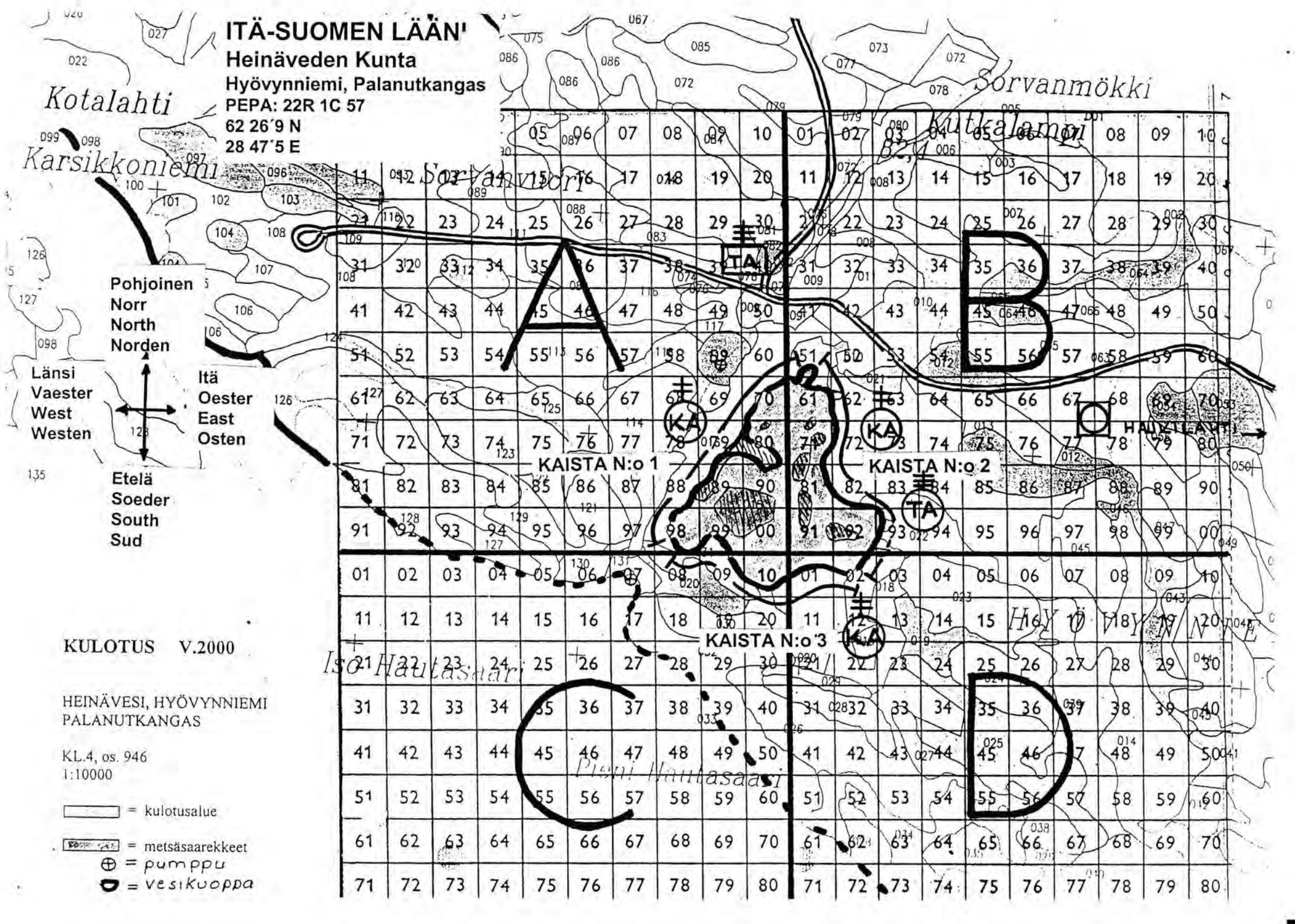
Palvelukeskus - Ruokakeskus
Sairaalatie 4 puh: 017-5781 476
Palomiesten-reserviläisten ruokailu

PALVELUT

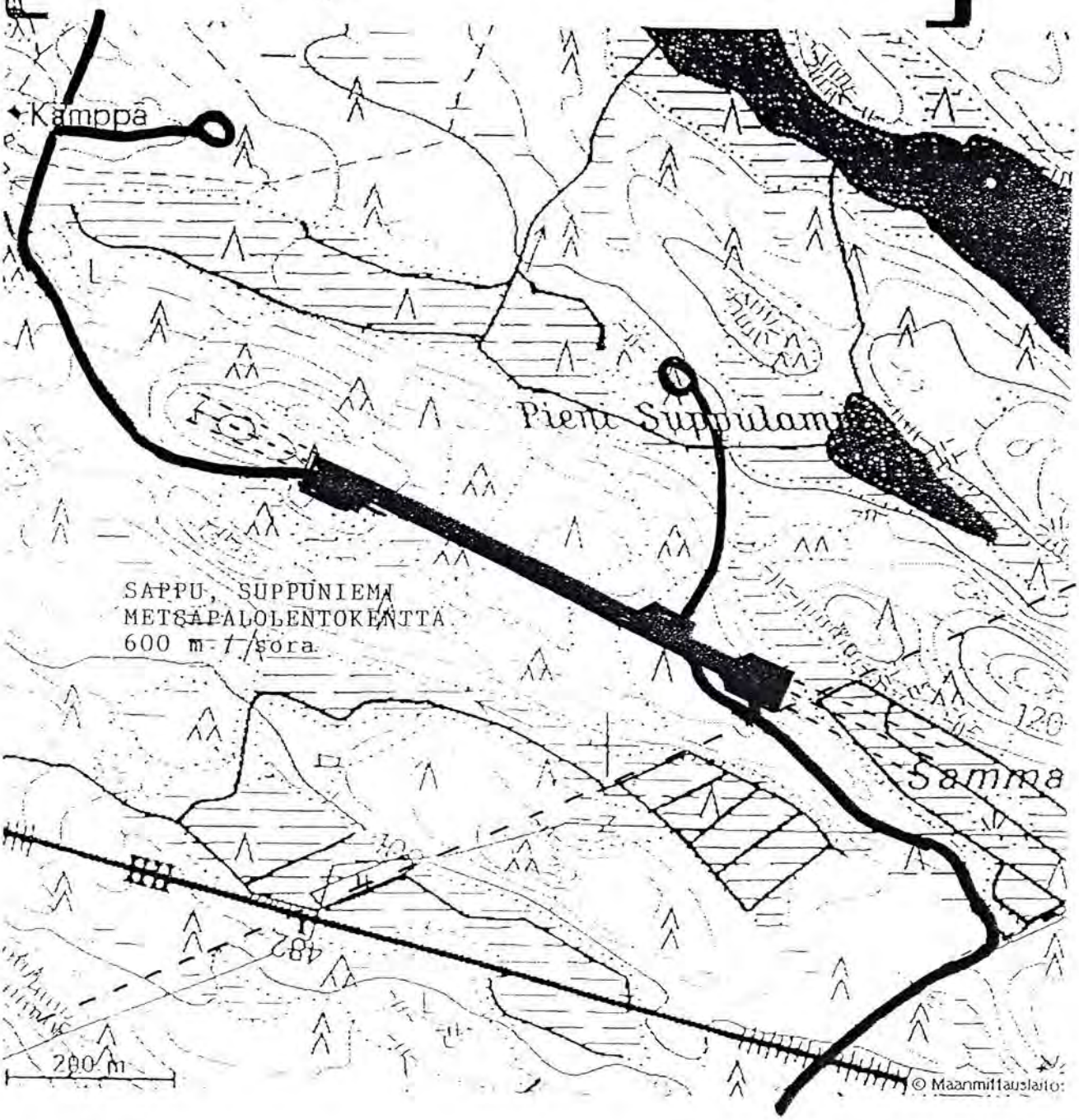
1 Kunnanvirasto
Palolaitos
2 Valtionvirastotalo
Poliisi
Posti
Tele
Työvoimatoimisto
3 Kirjasto, kansalaisopisto= Varjentiini
4 Päiväkoti
5 Seurakuntatalo
6 Pappila
7 Terveysasema
8 Terveystalo
9 Matkailutoimisto
10 Linja-autoasema
11 Laivalaituri
12 Vierasvenelaituri
13 Uimaranta
14 Urheilukenttä
15 Monitoimitalo
16 Yläaste
17 Lukio
18 Ala-aste
19 Kirkko
20 Kirkon hautausmaa
21 Parkintauksen hautausmaa
22 Museo
23 Otto Kotilaisen muistomerkki
24 Talvisotaan lähteneiden muistomerkki


HEINÄVESI 090
Sammutuskoneiden laskeutumispaikat
1. Sappu, Suppuniemi
- Metsäpalolentokenttä
2. Kerma
- mt. 476
3. Karvio, Humalajärvi
- vt. 23
4. Rummukkala
- mt. 476
5. Savonranta, Kieluanniemi
- Lannoitekenttä


4221 04
4221 05
28°46′
28°48′
28°50′
Karvio
Kuhavirta
Hentula
Viitasaari
Mäkkäraniemi
Laajalahti
Laajamäki
Kukkarovaara
Syväpuronmäki
Tammalahti
Hautalahti
Mustaniemi
Hautalahdensuo
Haapakaarre
Mäkkälänlehto
Räkäsaari
Kakkarasaari
Kotalahti
Sorvalampi
Sorvanvuori
Kurjenvarvas
Kärsikkoniemi
Kärsikkovirta
Kutkalampi
Rajalahti
Alasuo
Rimminsuo
Toivala
Hyövynniemi
Lääpsä
Lääpsänvuori
Lääpsänlahti
Palanutkangas
Ylämäki
Sikkomäki
Sikkolampi
Iso Hautasaari
Pieni Hautasaari
Ukonsaaret
Ukonlampi
Niinikko
Lahnalampi
Hyövynlahti
Petrumaa
62° 28′
62° 27′


ITÄ-SUOMEN LÄÄN
Heinäveden Kunta
Hyövynniemi, Palanutkangas
PEPA: 22R 1C 57
62 26´9 N
28 47´5 E
Kotalahti
Karsikkoniemi
Sorvanmökki
Kutkalampi
Sorvanvuori
Pohjoinen
Norr
North
Norden
Länsi
Vaester
West
Westen
Itä
Oester
East
Osten
Etelä
Soeder
South
Sud
KAISTA N:o 1
KAISTA N:o 2
KAISTA N:o 3
TA
KA
HAUKILAHTI
Iso Hautasaari
Pieni Hautasaari
KULOTUS V.2000
HEINÄVESI, HYÖVYNNIEMI
PALANUTKANGAS
KL.4, os. 946
1:10000
= kulotusalue
= metsäsaarekkeet
= pumppu
= vesikuoppa

Mittakaava
1 : 8 000 *
Toiminto
Keskitä
Liikkuminen
Koordinaatit
P / lat I / lon
6919217 4442917
N 62 22´4
E 28 53´6
Opastus Palaute
Alkutila Asetukset
Nimistö Osoitteet
Salasana Etusivu
Tilauspalvelu
Hakuja jäljellä: 182



KULOTUSOHJEET

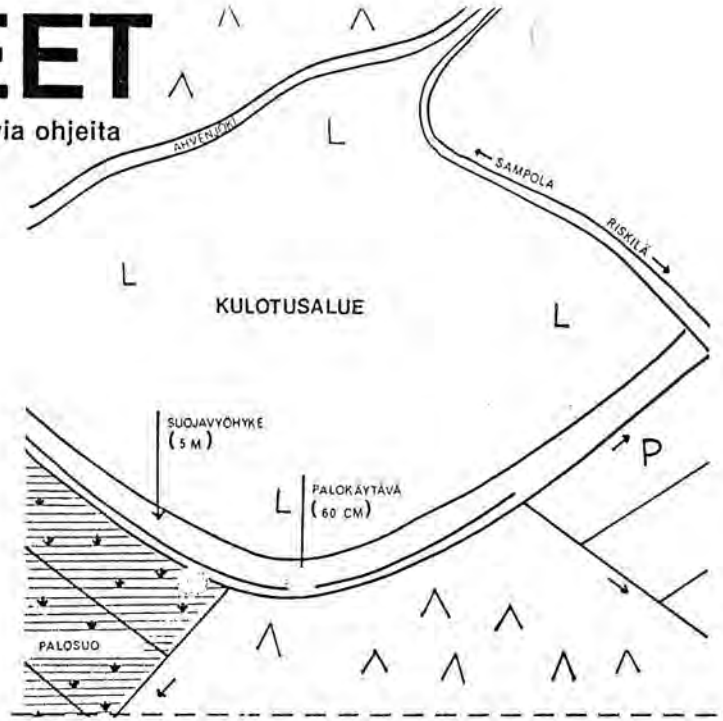
Noudattamalla kulotuksen valmistelussa ja suorituksessa seuraavia ohjeita saavutat hyvän tuloksen ja vähennät vahinkoriskiä.

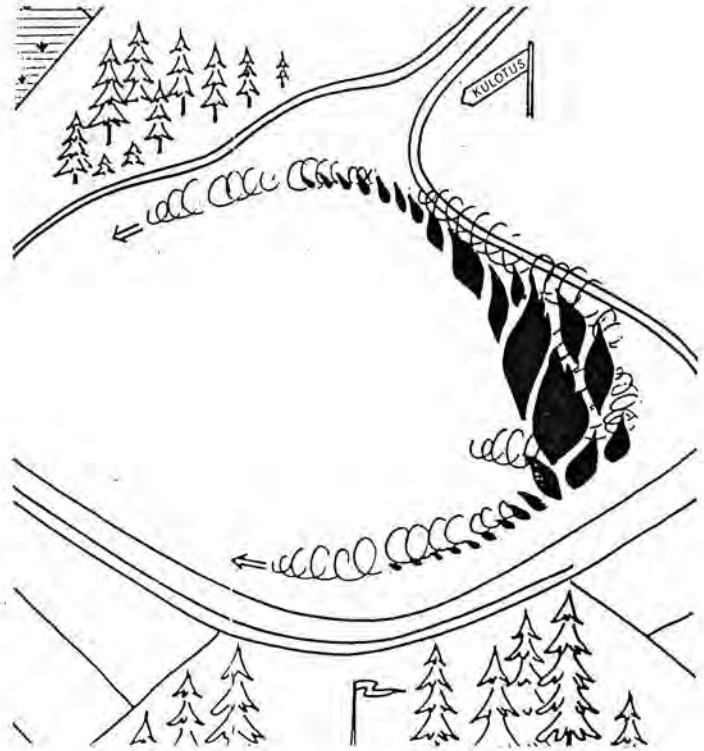
I ENNEN KULOTUSTA

1. Hanki asianmukaiset tekniset apuvälineet
   - tehokkaat sytytysvälineet
     - moottori- tai nestekaasusytytyslaitteet, sytytysputki
   - kunnolliset sammutusvälineet
     - kevyet moottoriruiskut, letkut, käsiruiskut, hosat
     - raivausvälineet
   - toimivat viestintävälineet
     - kevyet radiopuhelimet
     - yhteysväline aluehälytyskeskukseen
   - turvalliset suojavaatteet
     - vaatetus luonnonmateriaalista
     - asianmukaiset jalkineet ja käsineet
     - varaa paikalle tulenkestäviä suojapukuja ja käsineitä sekä savunaamareita

2. Huolehdi kulotuksen valmistelutoimenpiteistä
   - suunnittele ja rajaa kulotusalue selväpiirteisesti
     - käytä luonnonmukaisia rajoja (tiet, suot, vesistöt, pellot)
     - älä rajaa aluetta samana vuonna kulotettuun alueeseen
   - raivaa suojavyöhyke
     - poista hakkuutähteet ja jätepuusto
   - tee palokäytävä tai hyvin kasteltu eristämisvyöhyke
     - käytä palle- tai pienauraa tai kaivinkonetta
   - suojaa alueella olevat linnunpesät
   - laadi sammutussuunnitelma
     - kulotusalueen sijainti ja laajuus
     - kulotuksen ajankohta
     - johto ja henkilöstön määrä
     - käytettävä sammutuskalusto
     - vedenottopaikkojen sijainti ja veden kuljetus
     - viestiyhteydet ja opastus

3. Tee vaadittavat ilmoitukset viranomaisille
   - lähetä sammutussuunnitelma vähintään viikkoa ennen
     - aluehälytyskeskukselle
     - kunnan palopäällikölle
     - paikalliselle poliisiviranomaiselle





II KULOTUKSEN SUORITTAMINEN

1. Ajoita kulotus oikein
   - älä kulota voimakkaalla ja puuskittaisella tuulella
   - aloita kulotus ennen kello 18

2. Suorita poltto oikein
   - sytytä tuulen alapuolelta
   - johda tulirintamaa vastatuuleen alueen reunoja kiertäen
   - käytä tarvittaessa vastatulta

III KULOTUKSEN JÄLKEEN

1. Huolehdi sammutuksesta
   - täydennä polttoa heikosti palaneissa kohdissa
   - sammuta kytevät kohdat runsaalla vedellä

2. Huolehdi jälkivartioinnista
   - järjestä kulotusalueen ja ympäristön jälkivartiointi
   - jatka vartiointia, kunnes tuli on täysin sammunut

Kulotuksen johtajana saa toimia vain tehtävään perehtynyt metsäammattimies.

Johtajan tehtävät:

- varmistaudu ilmoituksista
- varmistaudu sytyttämisajankohdan sopivuudesta
- varmistaudu tarpeellisista välineistä
- varmistaudu henkilöstön riittävyydestä ja koulutuksesta
- selvitä henkilöstön tehtävät
- huolehdi vartioinnista kulotusalueen ulkopuolella
- huolehdi sammutuksesta ja jälkivartioinnin järjestämisestä
- järjestä huolto (elintarvikkeet, juomat, ensiapu)
- huolehdi sammutussuunnitelman noudattamisesta
- huolehdi vakuutuksista — ota Sammon kulotusvakuutus ja lakisääteinen tapaturmavakuutus.

Baltex Fire 2000 5 - 9 June Kuopio - Finland

INFORMATION DESK

Situated in the mainbuilding´s lobby

OPEN:

Monday	10.00 - 20.00
Tuesday	08.00 - 17.30
Wednesday	08.00 - 11.30
Thursday	08.00 - 12.00
Friday	08.00 - 13.00

SAUNA

Sauna with a pool (mainbuilding)	Mon – Fri	19.00 – 23.00 (Towels are in the sauna)
Sauna in the dormitory	Mon – Fri	07.00 – 09.00 (Please bring towel from your room)
	Mon – Fri	19.00 – 23.00 (Please bring towel from your room)

SMOKING

Smoking is not allowed indoors. Notice that there are ashtrays by the entrances.

CONTACT PERSONS

Harry Frelander	040-4222 891
Timo Heikkilä	040-5844 274
Jari Honkanen	040-7706 121
Seppo Virtanen	050-3625 108

TELEPHONES

Payphones are situated on the groundfloor in the dormitory. You can pay with coins or AVANT-phonecards. Cards á 30 FIM can be bought at the information desk.

PUB

The College pub is on the groundfloor in the dormitory.

OPEN

Mon	15.00 – 17.00
	23.00 –
Tue	21.30 –
Wed	22.00 –
Thu	22.30 –
Fri	11.00 – 14.00

MINISTRY OF INTERIOR

Regulations

Instructions issued on 26 April 2000
No. SM-2000-00731/Tu-314
Valid from 24 April 2000 until further notice
Regulation based on the Rescue Service Act (561/1999) sections 8, 27 and 31
Amending/rescinding the instructions for fire safety on peat sites, No. 8/011/93, 28 March 1994
Issued for application by peat producers, municipalities, provincial administrative boards

---

INSTRUCTIONS FOR THE FIRE SAFETY OF PEAT PRODUCTION SITES

1. General

According to section 8 of the Rescue Service Act, the owner and occupant of a building, an industrial or commercial operator, a government office, an institution, or some other community shall take precautions to protect people and property in the area as well as its environment in case of emergency, and shall take such rescue measures that they are capable of independently.

According to section 27 of the Rescue Service Act, special attention must be paid to fire prevention in peat production. Peat production must be interrupted if there is an imminent danger of fire because of wind or for some other reason.

According to section 31 of the Rescue Service Act, a peat production area is a site where the operations or conditions cause an exceptionally great risk of fire or a hazard to personal safety or to the environment.

The Ministry of the Interior issues the following instructions for the fire safety of peat production areas.

2. Classification of peat production areas

Peat production areas are divided according to their continuous production surfaces into five groups:

	Production surface
Class I	250 hectares or more
Class II	150 to 250 hectares
Class III	70 to 150 hectares
Class IV	10 to 70 hectares
Class V	less than 10 hectares

3. Compulsory registration

A notice in writing must be given to the municipal fire chief when a peat production area is opened. This notice shall indicate where and when the peat production area is

laid out, how large the planned production area is and who will be responsible for the fire protection in the peat production area. The notice should also contain the contact information on the owner of the production area as well as on the operator. It is recommended that 1:20000 and 1:200000 maps, or other details of the location, indicating the rescue service grid and the map sheet, are attached to the notice.

It is important to ensure that the corresponding information is sent to the municipal fire chief also on the existing peat production areas.

4. General arrangements in a peat production area

The general arrangements for a peat production area must provide for the prevention and confinement of fire and other accidents or disasters, and for the extinction of fire.

4.1 Safety zones

The purpose of safety zones is to retard and to confine the spreading of the fire.
The following may be considered as safety zones:
- luxuriant road-side areas
- hardwood growing areas beyond bordering ditches
- natural litter deposits between sections
- green belts no longer used for the production, as well as large levelled embankments of sectioning, dragging, bordering and isolating ditches

For extinction, it is important to use roads, other ways or passages, or safety zones to divide larger continuous peat production areas into smaller sections. It is especially important to prevent the spreading of the fire into nearby settled areas.

4.2 Road system

Signs must be put up at the junction of the road leading from the outside to the peat production area.

The roads in the peat production area are designed principally with a view to the production. In the event of a fire these roads are also used by fire-fighting units. That is why the roads must be planned so that they are suited for fire-fighting units.

If possible, there should be two roads which lead to the peat production area from two different directions. The minimum bearing capacity of these roads should be 25 tons so that they will carry the tank trucks of the fire departments.

The passing and turning places must be discussed with the municipal fire chief.

To shut out unauthorized traffic, these roads must be provided with barriers.

4.3 Storages for flammable liquids and standing places for machinery

The storages for flammable liquids as well as the standing places for machinery must be covered with mineral soil because of their large fire loads and inflammability. The standing places for machinery must be chosen so that they are far enough from the storages of flammable liquids in order to prevent that any burning machines set fire on these storages. It is also recommended that the machines are placed far apart so that one

machine will not catch fire from another.

4.4 Machine maintenance and cleaning

The machines used for peat production must be inspected prior to production start-up. The machines should be cleaned at least once every shift and more frequently, if necessary.

Machine repairs must be made in mineral-covered areas appointed for the purpose and approved for open-flame work. If open-flame work is needed for the maintenance or repair of the machines, these must be cleaned before the repair. The repaired machine must be cooled and hosed down carefully. If for some compelling reason a machine must be repaired on the peat flat, the area around and under the machine must be hosed down. Besides, enough fire-fighting equipment and personnel must be ready for action on the site.

4.5 Location of peat stacks

Peat stack fires are more common than peat flat fires. That is why special attention must be paid to the location, foundation and formation of stacks in the peat production area.

Peat stacks should be placed close to a road which is accessible to fire-fighting equipment. Fire-extinguishing water basins are placed, if possible, near the peat stack.

4.6 Prohibitory signs

No-admission or prohibitory signs are put up to show that unauthorized persons are not allowed in the peat production area and that smoking and open fires are prohibited there. These signs are placed next to the roads leading to the peat production areas.

5. Fire inspection

A fire inspection is carried out in a new peat production area before the production start-up. The peat production areas must be fire-inspected at least once a year during the production season.

6. Safety plan for the peat production area

A safety plan is made for the peat production area and is sent to the municipal fire chief. The plan should be inspected annually before the beginning of the production season and always when essential changes are made in the site arrangements. Any changes in the plans shall be reported to the municipal fire chief.

The safety plan must be made when the production area is put in proper order. It is completed before the production start-up.

The purpose of the safety plan is to review the risk situations, the precautionary measures to prevent risk situations, the personnel for emergency fire fighting, personnel training, the location of the fire-fighting equipment in the production area, and other arrangements and actions in the event of an accident.

The safety plan should include at least the following details:

6.1 General information on the production area

The general information should give a proper steer to the site, the size of the production area, the contact data of the fire-fighting organization as well as the communications in the production area.

6.2 Prevention of accidents

In the peat production areas fires are mainly caused by sparks from the drawing vehicles and from the working machines, by careless handling of fire, by motorcars on the peat flats and by careless working methods. A strong wind spreads the fire rapidly.

The safety plan should stress the principles to be followed in the different operations. Proper working methods significantly reduce the risk of a fire breaking out.

The prevention of accidents also includes those measures which are needed to maintain, overhaul and clean the production equipment.

6.3 Precautions and the alarming system

In spite of the precautionary measures, there are accidents in peat production areas. Therefore the personnel and the equipment in the production area must be ready for emergency fire fighting and confinement of accidents. The people who work in the production area take part, to the extent possible, in emergency fire fighting, using the production equipment and the fire-fighting equipment to confine the fire before the fire brigades come to the site, and they continue to work with these fire fighters to confine and to extinguish the fire.

In addition to the confinement of fires, the safety plan also lays down the principles of assessing the situation and giving the alarm. The alarm system must include the procedure for the alarms within the organization and for calling out the fire brigade.

6.4 Required information in an emergency

The safety plan must indicate the risks and the threats, as well as the essential measures for fire fighting. Therefore appended to the safety plan must be a 1:10000 map of the production area, a 1:20000 base map, with the number of the rescue service grid, and a 1:200000 gt-map. The target data and the coordinates of the rescue service grid are marked on the GTt-map.

The available roads are marked on the maps in different colours according to their bearing capacity, together with the sources of water supply, the stack sites and the base. It is recommended that the markings are made as follows:

Roads:
- a road that bears the fire department's equipment is marked in red
- the roads accessible to tractors are marked in black
- the bridges and culverts across sectioning and dragging trenches and other similar ditches are marked on the production area maps
- the roads in the production area which bear the fire department's equipment are marked and named on the map of the scattered settlement

Sources of water supply:
- marked on the map with a blue circle

Stack sites:
- marked on the map with a rectangle

Base:
- marked on the map with the code TK

Helipad:
- marked on the map with the letter H

7. Training of the peat production site personnel

Special attention must be paid to the prevention of fires in the peat production area. Proper working methods with a view to fire safety must be taught to every person who works in the peat production area. This is done in a training session arranged on the site annually before the work begins. The training is organized by the peat producer.

At least the following subjects must be included in the training given to the peat production site personnel:

- weather-induced risks, especially risks due to wind
- the risks of the different operations
- safe working methods for the different operations
- actions in the event of a fire
- how to assess the situation in the event of a fire
- emergency fire fighting
- how to give an alarm in the production area
- how to make an alarm report to the rescue coordination centre
- fire confinement and other measures before the fire fighters arrive
- cooperation with the fire fighters
- arrangements for guarding

8. Interruption of the peat production

A strong wind increases the risk of a fire in the peat production area. Production must be interrupted if the wind speed is above 10 metres per second.

9. Alarming

While the work is going on in a peat production area, it must always be possible to make an alarm report to the rescue coordination centre in the event of a fire or some other emergency. Every working unit must have communication with the other working units, or with a place from where an emergency call can be made to the rescue coordination centre. All working machines must carry in a visible place clear instructions for the emergency procedure.

10. Fire-fighting equipment

10.1 Emergency fire fighting

The stacking machine, the digger, the drawing vehicle or the combined drawing vehicle/working machine must have a 6 kg 34 A-183BC portable fire extinguisher, at least 15 litres of softened extinguishing water in a pressurizable tank fitted with an atomizer nozzle, or at least 40 litres in a tank equipped with a sprinkler, a spade, a metal bucket, as well as a wire chain, a tow chain or a towing line. The portable fire extinguisher must be inspected once a year.

10.2 Other fire-fighting equipment

It is recommended to provide the peat production area with at least the following fire-fighting equipment:

Fire-fighting equipment	Peat production area class				
	I	II	III	IV	V
Tractor fire pump	1	1	1	-	§-
Tank trailer 1)	1/250ha	1	1	1	-
Equipment trailer 2)	1/250ha	1	-	-	-
Drawing vehicle	1	1	1	1	1
Emergency fire-fighting tank	2/250 3)	2	1	1	-
Mini motor pump (output 200l/min at 300KPa)	1/250ha	1	1	1	1
Hoses and armatures					
- fire hose 76 m	600m	400m	300m	100m	-
- fire hose 39-51 mm	1000m	600m	400m	200m	100m
- atomizer pump pipe 39-51mm	6	4	3	2	1
- distributing coupling	3	2	1	1	-
- adapter coupling	2	2	2	1	-
Water softener (litres)	200	120	60	60	20
Metal bucket	12	12	6	6	2
Spade	6	6	4	2	2
Production area map (1:10000)	10	8	6	4	2
Other equipment					
- wind sleeve	1	1	1	1	1
- wind gauge	1	1	1	1	1

The availability of the drawing machine must be ensured also during production interruptions.

1) The capacity of the tank trailer must be at least 2500 litres and it must be capable of off-road travel.

- fire hose 39-51 mm	100 m
- pump pipes 39-51 mm (pcs)	2
- metal buckets (pcs)	4
- water softener	40 litres
- distributing coupling (pc)	1
- adapter coupling (pc)	1
- spade (pc)	1

2) The equipment trailer must be equipped with a tractor hitch. The units placed in the equipment and tank trailers are included in the total figures for the fire-fighting equipment
3) The emergency fire-extinguishing tank must have a capacity of at least 200 litres and be equipped with a motor-driven pump, a hose with a sprinkler and a discharging cock. The emergency fire-fighting tank shall travel with the production unit.

Equipment may be replaced as follows:

- the equipment trailer may be replaced by a tank trailer, provided that the tank trailer is equipped with the same amount of equipment as the equipment trailer
- a tank trailer equipped with a tractor-driven fire pump may be replaced by a tank trailer equipped with a light motor pump and a separate tractor pump
- a tank trailer in a class IV peat production area may be equipped with a light motor pump or a tractor pump (minimum output 500 litres per minute at 600 KPa)

If there are several peat production areas close to one another in the same municipality, the amount of hose equipment may be reduced, subject to the fire chief's consent, by 20 to 40 per cent, in proportion to the number of production areas sharing the equipment, indeed on the following conditions: producers and contractors agree about the shared use of the equipment, the hoses are kept in a warm storage, inspected and pressure-tested once a year.

11. Fore-extinguishing water

An inexhaustible source of water supplies water under all conditions during the production season. There must be at least one inexhaustible water source in the peat production areas. The inexhaustible water source should be located next to good road connections.

In addition to inexhaustible water sources, the peat production areas must also have fire-extinguishing water basins.
The table here-below gives the recommended minimum number of fire-extinguishing water basins.

Class	Minimum number of fire-extinguishing water basins	In addition to the minimum
I	16	One basin per every commencing 250 ha and over 40 ha above the lower limit
II	11	One basin per every commencing 150 - 250 ha 20 ha above the lower limit
III	7	One basin per every commencing 70 - 150 ha 20 ha above the lower limit
IV	1	One basin per every commencing 10 - 70 ha 10 ha above the lower limit
V below 10 ha	1 at least a mobile 2.5 m3 water tank	May be replaced by two fire-extinguishing water basins

The fire-extinguishing water basins should be laid out in such a place that they hold

fire-extinguishing water during the production season. Their recommended minimum size is 50 m3. The fire-extinguishing water basins are cleaned at regular intervals.

In the terrain, the fire-extinguishing water basins are marked with a white or yellow sign, minimum diameter 600 mm, placed 1.5 metres above ground.

The basins for fire fighting from helicopters must be at least 1.5 metres deep, with a minimum capacity of 50 m3. They must be placed so that the helicopter can safely fill its water tanks.

The access of the fire-fighting equipment to the extinguishing water basins must be ensured by building the required culverts and bridges/overpasses. Next to the fire-extinguishing water basins, suitable ramps or mineral soil platforms need to be built for the pumping of water.
The arrangements for fire fighting must be discussed with the municipal fire chief.

12. Guarding

A fire which is put out in a peat production area tends to break out again. Arrangements must be made for guarding after the fire. This means continuous watching until it is quite certain that the fire will not break out again. According to section 49 of the Rescue Service Act, the owner or occupant of the site must arrange for the clearing and guarding of the area after a fire.

Arrangements must also be made for guarding during the production and during its interruptions. After an operation is finished, as well as during production interruptions, control should be provided by visits. When an operation is completed, it is especially important to make an inspection not later than two hours after the termination. Guarding arrangements during the production interruptions also depend on weather conditions.

Director for emergency services Veikko Peltonen
Special planner Taito Vainio

Distribution:
Municipalities
Turveteollisuusliitto (Peat Industry Association)
Suomen turvetuottajat (Finnish Peat Producers)
Vapo Oy (Ltd)
Turveruukki Oy (Ltd)

For information:
Provincial administrative boards

MINISTRY OF INTERIOR

Regulations

Instructions issued on 26 April 2000
No. SM-2000-00731/Tu-314
Valid from 24 April 2000 until further notice
Regulation based on the Rescue Service Act (561/1999) sections 8, 27 and 31
Amending/rescinding the instructions for fire safety on peat sites, No. 8/011/93, 28 March 1994
Issued for application by peat producers, municipalities, provincial administrative boards

---

INSTRUCTIONS FOR THE FIRE SAFETY OF PEAT PRODUCTION SITES

1. General

According to section 8 of the Rescue Service Act, the owner and occupant of a building, an industrial or commercial operator, a government office, an institution, or some other community shall take precautions to protect people and property in the area as well as its environment in case of emergency, and shall take such rescue measures that they are capable of independently.

According to section 27 of the Rescue Service Act, special attention must be paid to fire prevention in peat production. Peat production must be interrupted if there is an imminent danger of fire because of wind or for some other reason.

According to section 31 of the Rescue Service Act, a peat production area is a site where the operations or conditions cause an exceptionally great risk of fire or a hazard to personal safety or to the environment.

The Ministry of the Interior issues the following instructions for the fire safety of peat production areas.

2. Classification of peat production areas

Peat production areas are divided according to their continuous production surfaces into five groups:

	Production surface
Class I	250 hectares or more
Class II	150 to 250 hectares
Class III	70 to 150 hectares
Class IV	10 to 70 hectares
Class V	less than 10 hectares

3. Compulsory registration

A notice in writing must be given to the municipal fire chief when a peat production area is opened. This notice shall indicate where and when the peat production area is

laid out, how large the planned production area is and who will be responsible for the fire protection in the peat production area. The notice should also contain the contact information on the owner of the production area as well as on the operator. It is recommended that 1:20000 and 1:200000 maps, or other details of the location, indicating the rescue service grid and the map sheet, are attached to the notice.

It is important to ensure that the corresponding information is sent to the municipal fire chief also on the existing peat production areas.

4. General arrangements in a peat production area

The general arrangements for a peat production area must provide for the prevention and confinement of fire and other accidents or disasters, and for the extinction of fire.

4.1 Safety zones

The purpose of safety zones is to retard and to confine the spreading of the fire.
The following may be considered as safety zones:
- luxuriant road-side areas
- hardwood growing areas beyond bordering ditches
- natural litter deposits between sections
- green belts no longer used for the production, as well as large levelled embankments of sectioning, dragging, bordering and isolating ditches

For extinction, it is important to use roads, other ways or passages, or safety zones to divide larger continuous peat production areas into smaller sections. It is especially important to prevent the spreading of the fire into nearby settled areas.

4.2 Road system

Signs must be put up at the junction of the road leading from the outside to the peat production area.

The roads in the peat production area are designed principally with a view to the production. In the event of a fire these roads are also used by fire-fighting units. That is why the roads must be planned so that they are suited for fire-fighting units.

If possible, there should be two roads which lead to the peat production area from two different directions. The minimum bearing capacity of these roads should be 25 tons so that they will carry the tank trucks of the fire departments.

The passing and turning places must be discussed with the municipal fire chief.

To shut out unauthorized traffic, these roads must be provided with barriers.

4.3 Storages for flammable liquids and standing places for machinery

The storages for flammable liquids as well as the standing places for machinery must be covered with mineral soil because of their large fire loads and inflammability. The standing places for machinery must be chosen so that they are far enough from the storages of flammable liquids in order to prevent that any burning machines set fire on these storages. It is also recommended that the machines are placed far apart so that one

machine will not catch fire from another.

4.4 Machine maintenance and cleaning

The machines used for peat production must be inspected prior to production start-up. The machines should be cleaned at least once every shift and more frequently, if necessary.

Machine repairs must be made in mineral-covered areas appointed for the purpose and approved for open-flame work. If open-flame work is needed for the maintenance or repair of the machines, these must be cleaned before the repair. The repaired machine must be cooled and hosed down carefully. If for some compelling reason a machine must be repaired on the peat flat, the area around and under the machine must be hosed down. Besides, enough fire-fighting equipment and personnel must be ready for action on the site.

4.5 Location of peat stacks

Peat stack fires are more common than peat flat fires. That is why special attention must be paid to the location, foundation and formation of stacks in the peat production area.

Peat stacks should be placed close to a road which is accessible to fire-fighting equipment. Fire-extinguishing water basins are placed, if possible, near the peat stack.

4.6 Prohibitory signs

No-admission or prohibitory signs are put up to show that unauthorized persons are not allowed in the peat production area and that smoking and open fires are prohibited there. These signs are placed next to the roads leading to the peat production areas.

5. Fire inspection

A fire inspection is carried out in a new peat production area before the production start-up. The peat production areas must be fire-inspected at least once a year during the production season.

6. Safety plan for the peat production area

A safety plan is made for the peat production area and is sent to the municipal fire chief. The plan should be inspected annually before the beginning of the production season and always when essential changes are made in the site arrangements. Any changes in the plans shall be reported to the municipal fire chief.

The safety plan must be made when the production area is put in proper order. It is completed before the production start-up.

The purpose of the safety plan is to review the risk situations, the precautionary measures to prevent risk situations, the personnel for emergency fire fighting, personnel training, the location of the fire-fighting equipment in the production area, and other arrangements and actions in the event of an accident.

The safety plan should include at least the following details:

6.1 General information on the production area

The general information should give a proper steer to the site, the size of the production area, the contact data of the fire-fighting organization as well as the communications in the production area.

6.2 Prevention of accidents

In the peat production areas fires are mainly caused by sparks from the drawing vehicles and from the working machines, by careless handling of fire, by motorcars on the peat flats and by careless working methods. A strong wind spreads the fire rapidly.

The safety plan should stress the principles to be followed in the different operations. Proper working methods significantly reduce the risk of a fire breaking out.

The prevention of accidents also includes those measures which are needed to maintain, overhaul and clean the production equipment.

6.3 Precautions and the alarming system

In spite of the precautionary measures, there are accidents in peat production areas. Therefore the personnel and the equipment in the production area must be ready for emergency fire fighting and confinement of accidents. The people who work in the production area take part, to the extent possible, in emergency fire fighting, using the production equipment and the fire-fighting equipment to confine the fire before the fire brigades come to the site, and they continue to work with these fire fighters to confine and to extinguish the fire.

In addition to the confinement of fires, the safety plan also lays down the principles of assessing the situation and giving the alarm. The alarm system must include the procedure for the alarms within the organization and for calling out the fire brigade.

6.4 Required information in an emergency

The safety plan must indicate the risks and the threats, as well as the essential measures for fire fighting. Therefore appended to the safety plan must be a 1:10000 map of the production area, a 1:20000 base map, with the number of the rescue service grid, and a 1:200000 gt-map. The target data and the coordinates of the rescue service grid are marked on the GTt-map.

The available roads are marked on the maps in different colours according to their bearing capacity, together with the sources of water supply, the stack sites and the base. It is recommended that the markings are made as follows:

Roads:
- a road that bears the fire department's equipment is marked in red
- the roads accessible to tractors are marked in black
- the bridges and culverts across sectioning and dragging trenches and other similar ditches are marked on the production area maps
- the roads in the production area which bear the fire department's equipment are marked and named on the map of the scattered settlement

Sources of water supply:
- marked on the map with a blue circle

Stack sites:
- marked on the map with a rectangle

Base:
- marked on the map with the code TK

Helipad:
- marked on the map with the letter H

7. Training of the peat production site personnel

Special attention must be paid to the prevention of fires in the peat production area. Proper working methods with a view to fire safety must be taught to every person who works in the peat production area. This is done in a training session arranged on the site annually before the work begins. The training is organized by the peat producer.

At least the following subjects must be included in the training given to the peat production site personnel:

- weather-induced risks, especially risks due to wind
- the risks of the different operations
- safe working methods for the different operations
- actions in the event of a fire
- how to assess the situation in the event of a fire
- emergency fire fighting
- how to give an alarm in the production area
- how to make an alarm report to the rescue coordination centre
- fire confinement and other measures before the fire fighters arrive
- cooperation with the fire fighters
- arrangements for guarding

8. Interruption of the peat production

A strong wind increases the risk of a fire in the peat production area. Production must be interrupted if the wind speed is above 10 metres per second.

9. Alarming

While the work is going on in a peat production area, it must always be possible to make an alarm report to the rescue coordination centre in the event of a fire or some other emergency. Every working unit must have communication with the other working units, or with a place from where an emergency call can be made to the rescue coordination centre. All working machines must carry in a visible place clear instructions for the emergency procedure.

10. Fire-fighting equipment

10.1 Emergency fire fighting

The stacking machine, the digger, the drawing vehicle or the combined drawing vehicle/working machine must have a 6 kg 34 A-183BC portable fire extinguisher, at least 15 litres of softened extinguishing water in a pressurizable tank fitted with an atomizer nozzle, or at least 40 litres in a tank equipped with a sprinkler, a spade, a metal bucket, as well as a wire chain, a tow chain or a towing line. The portable fire extinguisher must be inspected once a year.

10.2 Other fire-fighting equipment

It is recommended to provide the peat production area with at least the following fire-fighting equipment:

Fire-fighting equipment	Peat production area class				
	I	II	III	IV	V
Tractor fire pump	1	1	1	-	§-
Tank trailer 1)	1/250ha	1	1	1	-
Equipment trailer 2)	1/250ha	1	-	-	-
Drawing vehicle	1	1	1	1	1
Emergency fire-fighting tank	2/250 3)	2	1	1	-
Mini motor pump (output 200l/min at 300KPa)	1/250ha	1	1	1	1
Hoses and armatures					
- fire hose 76 m	600m	400m	300m	100m	-
- fire hose 39-51 mm	1000m	600m	400m	200m	100m
- atomizer pump pipe 39-51mm	6	4	3	2	1
- distributing coupling	3	2	1	1	-
- adapter coupling	2	2	2	1	-
Water softener (litres)	200	120	60	60	20
Metal bucket	12	12	6	6	2
Spade	6	6	4	2	2
Production area map (1:10000)	10	8	6	4	2
Other equipment					
- wind sleeve	1	1	1	1	1
- wind gauge	1	1	1	1	1

The availability of the drawing machine must be ensured also during production interruptions.

1) The capacity of the tank trailer must be at least 2500 litres and it must be capable of off-road travel.

- fire hose 39-51 mm	100 m
- pump pipes 39-51 mm (pcs)	2
- metal buckets (pcs)	4
- water softener	40 litres
- distributing coupling (pc)	1
- adapter coupling (pc)	1
- spade (pc)	1

2) The equipment trailer must be equipped with a tractor hitch. The units placed in the equipment and tank trailers are included in the total figures for the fire-fighting equipment
3) The emergency fire-extinguishing tank must have a capacity of at least 200 litres and be equipped with a motor-driven pump, a hose with a sprinkler and a discharging cock. The emergency fire-fighting tank shall travel with the production unit.

Equipment may be replaced as follows:

- the equipment trailer may be replaced by a tank trailer, provided that the tank trailer is equipped with the same amount of equipment as the equipment trailer
- a tank trailer equipped with a tractor-driven fire pump may be replaced by a tank trailer equipped with a light motor pump and a separate tractor pump
- a tank trailer in a class IV peat production area may be equipped with a light motor pump or a tractor pump (minimum output 500 litres per minute at 600 KPa)

If there are several peat production areas close to one another in the same municipality, the amount of hose equipment may be reduced, subject to the fire chief's consent, by 20 to 40 per cent, in proportion to the number of production areas sharing the equipment, indeed on the following conditions: producers and contractors agree about the shared use of the equipment, the hoses are kept in a warm storage, inspected and pressure-tested once a year.

11. Fore-extinguishing water

An inexhaustible source of water supplies water under all conditions during the production season. There must be at least one inexhaustible water source in the peat production areas. The inexhaustible water source should be located next to good road connections.

In addition to inexhaustible water sources, the peat production areas must also have fire-extinguishing water basins.
The table here-below gives the recommended minimum number of fire-extinguishing water basins.

Class	Minimum number of fire-extinguishing water basins	In addition to the minimum
I	16	One basin per every commencing 250 ha and over 40 ha above the lower limit
II	11	One basin per every commencing 20 ha above the lower limit
150 - 250 ha		
III	7	One basin per every commencing 20 ha above the lower limit
70 - 150 ha		
IV	1	One basin per every commencing 10 ha above the lower limit
10 - 70 ha		
V	1	
below 10 ha	at least a mobile 2.5 m3 water tank	May be replaced by two fire-extinguishing water basins

The fire-extinguishing water basins should be laid out in such a place that they hold

fire-extinguishing water during the production season. Their recommended minimum size is 50 m3. The fire-extinguishing water basins are cleaned at regular intervals.

In the terrain, the fire-extinguishing water basins are marked with a white or yellow sign, minimum diameter 600 mm, placed 1.5 metres above ground.

The basins for fire fighting from helicopters must be at least 1.5 metres deep, with a minimum capacity of 50 m3. They must be placed so that the helicopter can safely fill its water tanks.

The access of the fire-fighting equipment to the extinguishing water basins must be ensured by building the required culverts and bridges/overpasses. Next to the fire-extinguishing water basins, suitable ramps or mineral soil platforms need to be built for the pumping of water.
The arrangements for fire fighting must be discussed with the municipal fire chief.

12. Guarding

A fire which is put out in a peat production area tends to break out again. Arrangements must be made for guarding after the fire. This means continuous watching until it is quite certain that the fire will not break out again. According to section 49 of the Rescue Service Act, the owner or occupant of the site must arrange for the clearing and guarding of the area after a fire.

Arrangements must also be made for guarding during the production and during its interruptions. After an operation is finished, as well as during production interruptions, control should be provided by visits. When an operation is completed, it is especially important to make an inspection not later than two hours after the termination. Guarding arrangements during the production interruptions also depend on weather conditions.

Director for emergency services Veikko Peltonen
Special planner Taito Vainio

Distribution:
Municipalities
Turveteollisuusliitto (Peat Industry Association)
Suomen turvetuottajat (Finnish Peat Producers)
Vapo Oy (Ltd)
Turveruukki Oy (Ltd)

For information:
Provincial administrative boards

Patrick Crill – Ken Hargreaves – Atte Korhola

The Role of Peat in Finnish Greenhouse Gas Balances

Ministry of Trade and Industry
Finland
Studies and Reports
10/2000

6 Conclusions and future research needs

6.1 Conclusions

After consideration and analysis of the information available to us, the committee has reached the following conclusions.

- Peat is continuously produced in the photosynthesis and litter production of specialized mire plant species, such as peat mosses (e.g. *Sphagnum* spp.), sedges (e.g. *Carex* spp.), and ericaceous shrubs (e.g. *Vaccinium* spp.). Organic matter derived from the plant production accumulates after being deposited on top or within a functioning peatland.

- Formation of peat biomass is similar to that of other plant derived biomasses, such as wood, but the time scales required for the accumulation of organic depositions are different. Tree stands growing in southern Finnish climates reach maturity in ca. 100 years, whereas peat deposits require up to thousands of years to be harvestable.

- Peat could be classified as a "biomass fuel." This is to distinguish peat from "biofuels" such as wood and from "fossil" fuels such as coal. Unlike "fossil fuels" but similar to "biofuels", "biomass fuels" are renewable. However, due to the long time span required for building up a harvestable peat deposit, in comparison to wood biomass, peat can be regarded as a "slowly renewable fuel" only.

- The carbon binding of undisturbed peatlands, and of those drained for forestry, is of such an order of magnitude that it may compensate for the emissions from the use of peat for energy production.

- According to life cycle analysis peat harvesting should be directed to peatlands under agricultural use when considering the radiative forcing impacts in Finland.

- Based on present knowledge of the GHG balances of cut-away peatlands it is not possible to give straightforward recommendations of the optimal choice of after-use management with respect to greenhouse impact. In most cases combination of afforestation and restoration to a functioning wetland ecosystem may give the best result.

- Considering the small area of peatlands in peat harvesting and as much of this area has been previously drained for forestry, it can be concluded that impact on biodiversity may not be great.
- Peat harvesting may have locally detrimental impacts on water resources important. Sufficient measures should be taken to eliminate or reduce them to acceptable levels.
- Even if drainage of wet minerotrophic peatlands clearly reduces the emission of methane from these ecosystems, it may be considered unethical to drain them for the sole purpose of creating GHG sinks. The value of these systems (e.g. hydrological, cultural, biological, etc.) may exceed that associated with GHG mitigation alone.

6.2 Future research

- The long-term average carbon accumulation in natural peatlands used in this report is based upon values derived from large field measurement datasets. These have been well documented and can be considered sufficient. However, these values represent the average accumulation rates during the entire period since the start of peat formation but we do not know the precise relation of these values to present accumulation rates. This should be studied using for instance direct gas exchange measurements, isotopes and modeling techniques.
- The average effect of forestry drainage, a practice necessary for silviculture, on the stores of carbon in peat and tree stands is known, based on large cross-sectional materials. However, also in drained peatlands with tree layer vegetation, the dynamics of GHG balances in relation to environmental factors and management practices are poorly quantified or understood. The measurements for the entire system net flux would require use of eddy covariance techniques on measuring towers that extend above the tree stands.
- There is only sporadic information of the GHG exchange of peatlands in agricultural use. New data should be acquired to facilitate modeling with crop types, peat depths etc. as driving variables.
- Little is known on the GHG balances of cut-away peatlands after harvesting has ended under different after-use forms. The development of vegetation and GHG flux dynamics after restoration to functioning wet-

land ecosystems should be studied with more extensive data (now only 1 site). The afforested sites need to be studied for the whole carbon balance (tree stand above and below ground parts and soil storage) together with the exchange of other GHG.

BALTEX FIRE 2000

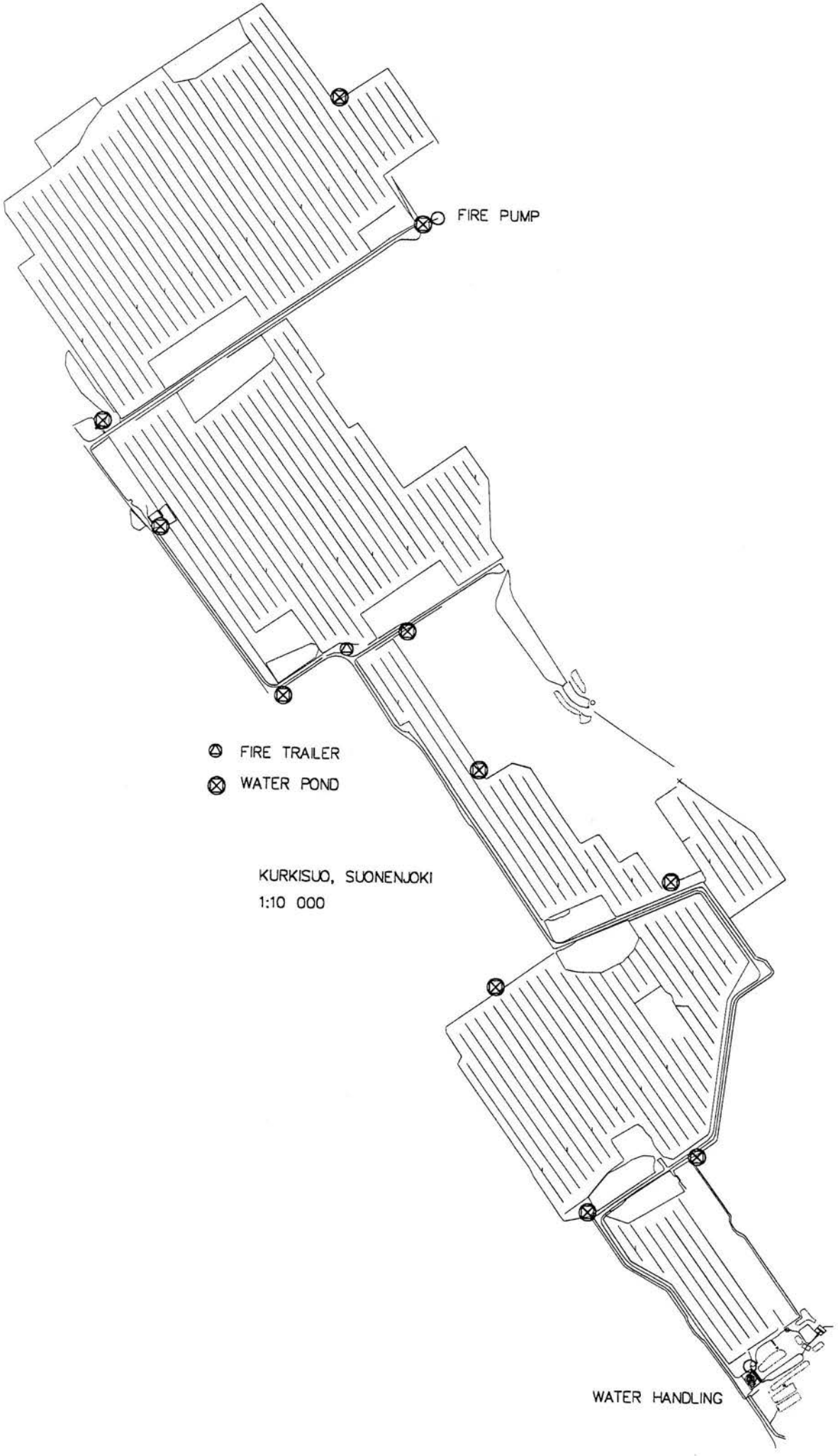
5-9 JUNE KUOPIO FINLAND

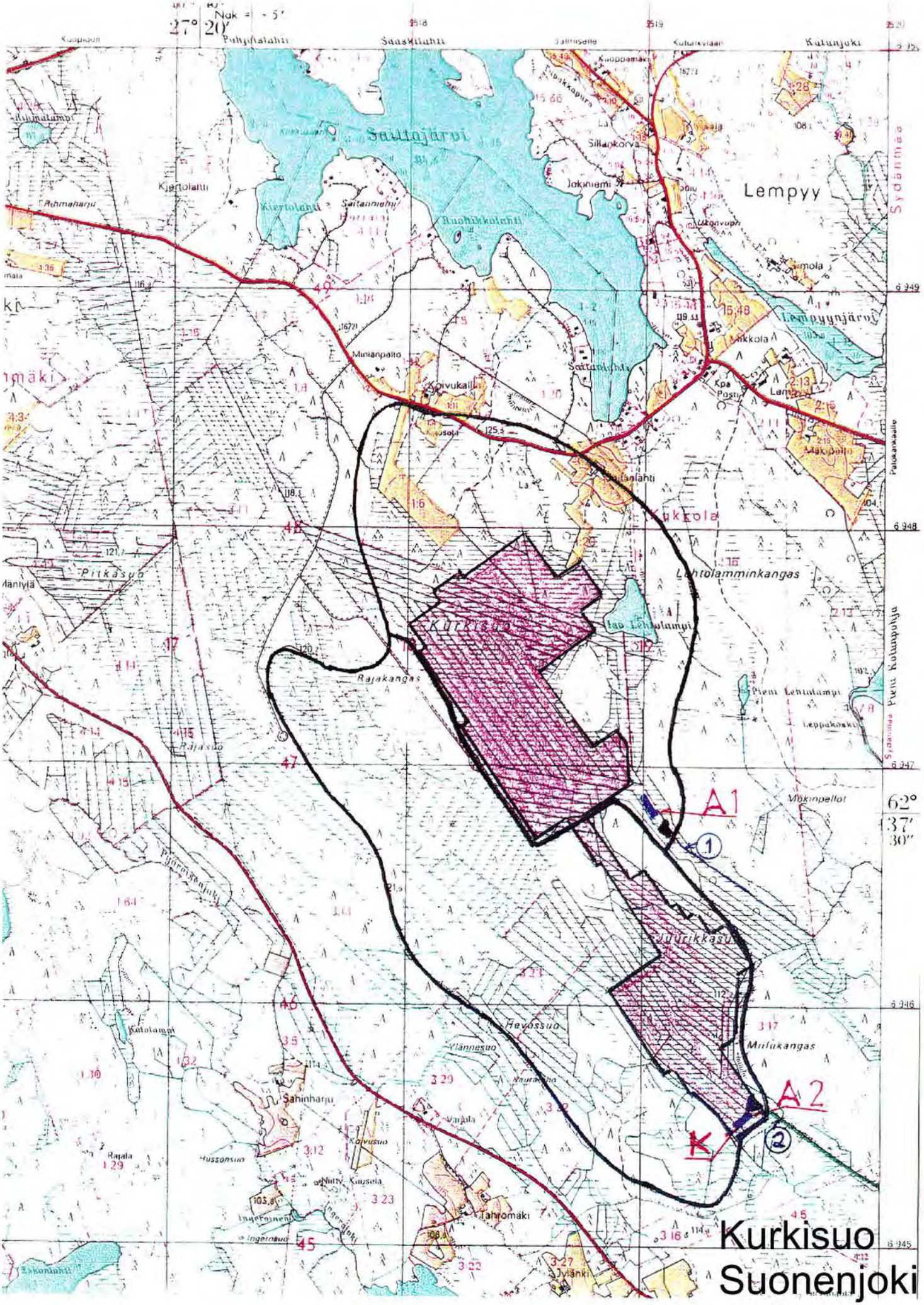
BALTEX FIRE 2000
PEAT BOG FIRE DEMONSTRATION
SUONENJOKI, KURKISUO 8.6.2000

VAPO OY
Energy

DATA FROM KURKISUO

Total area:	95 ha
Location:	45 km to the South from Kuopio
Preparation works:	1987 - 1990
Annual production:	About 60.000 m^3 milled peat
Production method:	Mechanical harvesting
Production resources:	Three tractors and necessary production and preparation equipment
Water handling:	Chemical treatment
Production enterpreneur:	Mr Kari Rönkä


FIRE PUMP
FIRE TRAILER
WATER POND
KURKISUO, SUONENJOKI
1:10 000
WATER HANDLING


Kurkisuo
Suonenjoki
1:20 000