

MUP
NAGASAKI
HANDBOOK
JAPANESE- ENGLISH
Mutual Understanding for Peace
Nagasaki

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Preface

There are several kinds of grass-roots movements in Nagasaki. The A-bomb was used on Nagasaki at the end of World War II. killing thousands and leaving many suffering from various forms of disease, severe keloid, radiation sickness. Therefore, it is quite understandable that there should be a particularly active antinuclear movement and an antinuclear weapons movement in Nagasaki City. For example, some of the people sit down in front of the Statue of Peace in the Peace Park every time when the nuclear test is held somewhere in the world; some of the A-bomb survivors relate their experiences to the younger generations.

On March 13, 1988, we organized a new type of volunteer group in Nagasaki City. We'd like to inform our feelings to other people about disaster of A-bomb and A-bomb victims. And not only to inform them, but also we have to know the radiation damage of today. We are interested in Mutual Understanding for Peace with an international viewpoint, meaning that we want to exchange our ideas about peace with peoples from all over the world. In order to promote opportunities for such contact, we volunteer to act as guides and interpreters for international visitors to Nagasaki City. The group is called MUP Nagasaki/

Soon after MUP Nagasaki was established, we realized that we needed a guide book for our job as interpreters, translators or guides, because the members of the group come from many different fields. We put together our own guide book written in both Japanese and English, entitled MUP Nagasaki Handbook. in only four months.

MUP Nagasaki Handbook consists of the following three parts.

Part One guides for the trails of the atomic bomb in Nagasaki City, which is called Nagasaki Peace Trail, and provides us with various kinds of information about Nagasaki City.

Part Two consists of The historical sketch in Nagasaki. Radiation Damage of Today' and Commentary'.

Part Three is the glossary for technical terms such as A-bomb survivor (victim), radiation victim, etc., and for special terms about peace. Nagasaki and so on.

An English index has been added to the end of the book.

Since MUP Nagasaki Handbook was compiled in such a short period, we are afraid that you will find many inadequacies. If you do find any oversight on our part, please do not hesitate to tell us about it.

July 16, 1988

MUP Nagasaki

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NAGASAKI PEACE TRAIL

INTRODUCTION

In speaking about the city of Nagasaki and its history, the issue of peace cannot be ignored. The monuments left here by the atomic bombing of August 9, 1945 are signs on the road to peace. With this in mind, we have entitled this chapter the "Nagasaki Peace Trail".

We invite you to join us and to walk together to a peaceful future.

-NAGASAKI PEACE TRAIL- (MAP2)

map number place

FD ----- Atomic Bomb Hypocenter

12; ----- Monument of Korean Atomic Victims

3 ----- One-legged Torii Gate

(3) ----- Nagasaki University School of Medicine

'3 ----- Urakami Cathedral

3) tttttttttttttttttttttttt Nyoko-do

i tttttttttttttttttttttttt Yamazato Primary School

(35; ----- Peace Park

(87; ----- International Culture Hall and Peace Hall

TD Atomic Bomb Hypocenter

The Allies knew that Germany was developing the atomic bomb. As the result, the U. S. began its own development in 1942 using many scientists who had escaped from Nazi Germany. In July 1945 they finally completed it and successfully exploded the first nuclear device (the atomic bomb) in the desert. Less than a month passed before this a bomb was dropped on human beings on Aug. 6th at Hiroshima, and Aug. 9th at Nagasaki. (Nagasaki-type atomic bomb was 3.5m. in length, 15m. in diameter. It weighed 4.5 tons and oval in shape. About 1.1kg. of plutonium released energy the equivalent to 22 kilotons of TNT.) At the time of this bombing, Germany had already capitulated to the Allies (May 8th, 1945), and Japan was the only country still fighting against the Allies.

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The main cities of Japan had been almost completely destroyed by daily air raids. In August 8th, the USSR invaded Japanese territory.

After six days and two atomic bombs, Japan finally did surrender unconditionally to the Allies and World War II was over (1939 Sep. 1st-1945 Aug. 15th)

(2) THE MONUMENT OF KOREAN ATOMIC VICTIMS

From 1910 to 1945 Japan colonized Korea. The Koreans, who were plundered of their own lands by Japan, wandered through the country or flowed into Japan. As the war of aggression expanded, Japan needed a larger labor force and more soldiers, so the Japanese government brought the Koreans to the battlefields and to Japan by force to exploit them (Over 1,000,000 Koreans are supposed to have been taken to Japan from 1939 to 1945).

As Nagasaki had ordnance factories and coal mines, many Koreans were working there during World War II. And on the horrible day that the atomic bomb exploded, about 20,000 Koreans suffered and half of them, 10,000, were killed.

CD ONE-LEGGED TORII GATE

On August 9, 1945 the blast of the atomic bomb hit this torii gate which stood at the entrance of the Sanno-shrine, which was about 800 meters southeast of the hypocenter.

The left side of the gate was blown away by the blast, but the right side remained standing on one leg with the stones in a balanced condition. A building specialist investigated the gate. and decided that it was sturdy.

A 400 year old camphor tree was badly burned in the blast and had no leaves for two months. In October, 1945, a cameraman was surprised to see new buds.

GD Nagasaki University School of Medicine (Former Nagasaki Medical College)

During the time of isolation, from the 16th century until 1859, Dejima in Nagasaki (a man-made island and the Dutch set-

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tlement) was Japan's only window to the western world. Western astronomy, geography, and other subjects were introduced through Dejima to Japan.

One of these subjects was that of medical techniques. In 1861, a Dutch physician working in Dejima founded a western style medical school which grew into The Nagasaki Medical College.

On August 9, 1945, Nagasaki Medical College was destroyed by the atomic bomb. It was only about 700 meters southeast of the hypocenter. The explosion instantly wiped out almost all the buildings and the facilities, and killed most of the professors and students. The total number was over 850. Their bodies were found seated in their destroyed classrooms.

All confirmed victims' names are written on a plaque set in Nagasaki University School of Medicine the Memorial Hall. Two monuments with prayers for the repose of the victims' souls are on the grounds of School of Medicine. The original heavy stone entrance of Nagasaki Medical College, which was tilted by the blast, has remained as the back gate of Nagasaki University School of Medicine.

3 URAKAMI CATHEDRAL

Urakami had been a Christian village since 1550. But since 1613, Christianity became a forbidden religion. And in 1868, every Urakami villager was ousted from his village. They returned his Village in 1873, and they decided to build Urakami Cathedral. They spent almost 30 years building it.

(Q NYOKO-DO

Dr. Nagai was an assistant professor at Nagasaki Medical College. Although he was seriously wounded by the atomic bomb in 1945, he worked as a doctor to cure other victims of the atomic bomb.

Nyoko-do was built for his study and sickroom by the people who lived around Dr. Nagai. This name, Nyoko-do, comes from the Bible, and refers to the sentence, "Love your neighbor as you love yourself." (Mark 12:31.)

Dr. Nagai wrote many books about peace and the atomic bomb.

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(D YAMAZATO PRIMARY SCHOOL

Yamazato Primary School is located on a hill which is 700 meters north of the hypocenter. When the atomic bomb fell, teachers were digging dugouts around the grounds and working at rice fields around the school. Children were playing on the playground. About 1300 pupils of the 1581 gathered on the day, and 28 teachers, died there.

Some of the child survivors later wrote about their experiences of that day. In 1949, Dr. Takashi Nagai published of these writings under the title "Living beyond the Atomic Cloud." The statue of those pupils, " was erected in memory of the children. Because the unveiling ceremony of this day was dedicated as 'World Peace Praying Day' at Yamazato Primary School on November 3. This monument is lower than other statues because Dr. Nagai wanted children to be familiar with the statue.

Other exposed primary schools

Shiroyama Primary School ----- (500m. west of the hypocenter)
About 1,400 pupils died.

Fuchi Primary School ----- (1100m. southwest of the hypocenter)
133 pupils died.

Nishiurakami Primary School---(1400m. north of the hypocenter)
170 pupils died.

8 PEACE PARK

At 11:02 am. August 9, 1945, the world's second atomic bomb exploded 500 meters over the Urakami section of Nagasaki city, instantly reducing to ashes everything in a radius of four kilometers. The explosion completely destroyed many houses and buildings, and about 74,000 people died and 75,000 were injured. On the 10th anniversary of the atomic bomb, Nagasaki Citizens established a peace park on a hill near the hypocenter. At the time of this bombing there was a prison here and the ruins still remain around the hedge Every year on August 9th Aibomb victims, the bereaved families and citizens gather to and hold a ceremony here to pray for the repose of the deceased and eternal peace.

PEACE STATUE

On August 9th, 1955, Nagasaki citizens erected this bronze

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peace statue which is 9.7 meters tall. It was created with a view to praying for peace and consolation of the war victims. The statue was created by Seibo Kitamura who was born in Nagasaki. The statue's right hand pointing upward depicts the threat of the atomic bomb, the left hand stretched horizontally, symbolizes peace and the lightly closed eyelids convey the idea of an ardent prayer to console the souls of the war dead. We, Nagasaki citizens, believe that this statue will be loved and will help contribute to the permanent world peace.

PEACE FOUNTAIN

This is a round fountain 18 meters across. It was constructed for the repose of the atomic bomb victims who died crying for water, and the extinction of nuclear weapons. It is our ardent wish that you will remember the shape of wings, imaging the clove of peace, and the crane after which Nagasaki harbor has been named because of its resemblance.

Inscribed on a black stone are the words written by a nine-year-old girl who was injured by the atomic bomb on the awful day.

I was very thirsty, so I was looking for some water.

I found some oil on the surface of water.

I really wanted something to drink.

After all, I drank that dirty water.

WORLD PEACE SYMBOLS ZONE

Nagasaki City established the "World Peace Symbols Zone" in 1978. We asked several countries to donate monuments for peace. Responding to our request, several monuments are presented from all over the world.

Statue of Maiden"(presented by the Peoples Republic of China)

In 1988, Citizens Society to Protect the Statue of Maiden was organized in Nagasaki.

"Monument of People,s Friendship"(presented by the German Democratic Republic)

In searching for a happy future and the peace of mankind, it shows the effort of peoples friendship.

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Joy Of Life"(presented by Czechoslovakia)

It express the joy of a mother and child as she holds up her child.

Statue of Peace"(presented by U.S.S.R.)

It shows love and peace of a mother holding her child in her arms.

"A Call"(presented by Bulgaria)

This is a woman lifting up her arm. It shows the fight of youth for peace and harmony.

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A Guide to
Nagasaki Scenic Spots
Glover House

This has been designated as an Important Cultural Asset and is the oldest western-style wooden house existing in this country. This four-leaf clover shaped house stands on a hill overlooking Nagasaki harbor. The scenery here reminds us of one of the settings for Puccini's opera, Madam Butterfly. This was built in 1863 as the residence of the late Thomas Blade Glover, a Scot. He came to Nagasaki from Shanghai just after the Nagasaki Port was opened to free trade in 1859. He founded the Glover Company and was engaged in the trading business. He imported arms and ships, etc. He built a railway line on the Oura seafront and demonstrated a steam engine for the first time in Japan. He developed the most modern methods of coal mining with the tie up between his company and the Nabeshima clan. He and the Satsuma clan constructed the most modern dock in this country at Kosuge. Thus, he contributed to the modernization of this country, and helped establish the Meiji Restoration.

Oura Catholic Church

Originally known as the Church of the 26 Martyrs. This is one of the national treasure and is the oldest wooden church of Gothic architecture existing in Japan.

This church was built in 1864 as a place of worship for foreigners residing in Nagasaki under the supervision of Petit Jean, a French missionary. In 1865 about 15 local people came to the church and asked Father Petit Jean. "Where is Mary?" He was very much surprised to realize that these were Christians who had kept their faith for more than 200 years since the banning of Christianity in Japan. This church is called the memorial place of underground Christians and of the 26 Martyrs.

The Old Site of 26 Martyrs

On February 5, 1597, 26 Christians (20 Japanese, 6 foreigners) were crucified on the site of Nishizaka Hill. At the military ruler Hideyoshi Toyotomi's order, they were arrested in Kyoto and Osaka because of their religious activities during the time of the ban on Christianity. and they were forced to walk to Nagasaki

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through the most severe weather. In 1862 they were canonized as saints by the Pope. In memory of their canonization as saints, this memorial, sanctuary, museum and park were built. On February 26, 1981 Pope John Paul II visited here and offered prayers.

S6fukuji Temple

This temple includes 2 National Treasures and 4 Important Cultural Assets.

The temple was founded in 1629 by a Chinese Zen priest. The Chinese people from various areas built individual temples to serve the people from different areas of China. Sbfukuji is the temple built by the people of the Fujian area. They enshrined Maso, a sea goddess, for the safety of their sailing. The religious rite of Chinese Bon Festival is held on July 26-28 of the lunar calendar for the consolation of the souls of their ancestors. Many Chinese who lived in Japan came here to take part in the Bon Festival at this temple. In 1682 a serious famine occurred. The priest of this temple ordered a huge cauldron to be made and offered rice gruel to the suffering people. It is said that the cauldron can cook enough rice gruel for 3,000 people.

Megane-bashi (Spectacles Bridge)

This has been designated as an Important Cultural Asset and is the oldest arched stone bridge in Japan.

This bridge was built over the Nakashima River at the instance of the Chinese priest Mokushi Jotei, the second chief priest of beukuji Temple. in 1634. When the bridge is reflected on the surface of the water, it looks just like spectacles, and it came to be called Spectacles Bridge.

Suwa Shrine

Nagasaki was opened to foreign in 1571. Later, when Nagasaki became a Christian city, the shrines and temples were destroyed by Christians in the later decades of the 16th century. The Tokugawa government prohibited Christianity and protected and assisted the shrines and temples. In 1624 Suwa Shrine was constructed. It lasted for 235 years and burned down in 1859. Ten years later it was reconstructed, and in 1984 many repairs were made and it took on its present appearance.

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Kunchi Festival

The first Kunchi festival was held in 1634 to give thanks for the harvest and for well-being for the previous year. During its 350 years the festival has become refined and uniquely Nagasaki's by incorporating Dutch and Chinese contributions. This festival has been designated as an Important Intangible Folkways Cultural Asset. It is held on October 7, 8 and 9 every year and is well-known in Japan as one of the 3 biggest festivals in this country.

Dejima

Dejima was a fan-shaped, man-made island constructed in 1636 by 25 Nagasaki merchants on the order of the Nagasaki magistrate's office. This order was the result of the Tokugawa government's national isolation policy which was designed to abolish Christianity. Dejima was also designed to cut illegal trade. This island became a trading settlement for Portuguese merchants. Two years later, trade with Portugal ended and a Dutch firm was transferred from Hirado in northern Nagasaki prefecture in 1641. The Dutch monopolized trade for more than 200 years. Dejima was the sole gateway open to the western world. Overseas culture came into Dejima first and spread all over Japan. A 1/15 size model of Dejima has been constructed at the site of the original Dejima.

Unzen

Unzen, an inactive volcano is an internationally known hot spring resort which is located in the middle of Shimabara Peninsula and is surrounded by mountains. Unzen is dotted with spas, lakes, and waterfalls and attracts visitors for its grand scenery which changes seasonally. With azaleas, maple trees and frost-covered trees. The average temperature is 11 C and even in summer, it doesn't rise over 25 C. Unzen was designated as a National Park in 1934, the first in Japan by the national government. It was selected because the mountains are considered the most beautiful in Japan. Unzen and Banff (the first National Park in Canada) are sister parks.

Unzen Golf Course

Constructed in 1926; the first public golf course in Japan

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Proterozoic Marsh

It is designated as a Natural National Monument. Originally a hot spring, it is now a marsh filled with native plants.

Shimabara

Shimabara was a castle town and can be called "Ta water town". Its calm climate and clean spring water gushing out here and there and streams flowing make visitors' hearts sing.

Shimabara Castle

This was constructed in 1625 by the feudal lord, Shigematsu Matsukura after 7 years of labour. The people of the manor suffered a heavy tax and oppression. He also strictly controlled the Christians. The people finally resisted. The Shimabara Riot was the biggest revolt during 300 years of the Tokugawa reign. In 1960, Shimabara castle was reconstructed.

The Old Site of Warriors House

Noncommissioned officers' houses stood on the west side of Shimabara Castle. In the middle of the road a stream flows.

Templethrines andChurch
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Temples, Shrines and Churches
Yasaka Shrine (AiEW 7t)
S6fukuji Temple(5%?%\$)
(erected in 1629)
K6fukuji Temple(\$1?\$%)
(erected in 1620)
Suwa ShrineGWfiiiWHZ)
(erected in 1625)
Matsunomori Shrine (ff: 03 \$741711)
Sh6fukuji TemplekQ???)
(erected in 1677)
Fukusaiji Temp1e(7517????)
(erected in 1628)
Oura Church(the Catholic Church)
Nakamachi Church (Cath.)
Ginyamachi Church(the Protestant
Church)
Rutel Nagasaki Church(Prot.)
(see MAP 3)
22-3833
23-2645
22-1076
24 -0445
22-7079
25-9316
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Streetcar Stations (MAP4)

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100 Single ride

500 Daily

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Hotels (see MAP 5)
No.\$ Nagasaki Tbkyi Hotel
(A15f' 8,900 & 9.900
(B) 3f 15,900
(C) 3% 15.300 to 20000
(Not including Tax.)
1 - 18 Minamiyamate -machi TEL 25 - 1501
(2) Nagasaki View Hotel
35 10,000
2-33 Oura-machi TEL 24#2211
69 Hotel New Tanda
2 #24 Tokiwa i machi TEL 27 - 6121
(9
Nagasaki Oranda-zaka Y. H.
5? 1.900 1members1
3E 2,400 mot members)
6714 Higashiyamate-machi TEL 22-2730
:31 Minato Park Hotel
(A1 I#61500
(B1 #V 8. 800
1C1 0; 7. 800
8-16 Shinchii-machi TEL 27#1311
L131 Nagasaki Bus Terminal Hotel
(A) 3% 4.400
(B1 3E 7, 000
1 C 1 3f 7. 800
8016 Shinchii-machi TEL 21-4111
q Nagasaki Washington Hotel
(A1 0% 6,400 & 6.600
1B1 3f 11.000
1C1 1' 12,300
91-01 Shinchii-machi TEL 28_1211

(ED Nagasaki T661 Hotel
(A) 3% 5, 500
(B) 5E 9, 400
(C) E1510,6630 & 15,000
7-24 D6za-machi TEL22-2121
6)) Holiday Inn Nagasaki
(A) 3F 7,500 to 8,500
(B) 51? 13,000 & 17,000
(C) 3% 13,000 to 15,000
6-2 D6za-machi TEL 28-1234
f0 Nagasaki Grand Hotel
(A) 1!; 7, 000
(B) E? 13,000
(C) 3F 13,500
5-3 Manzai-machi TEL 23-1234
GD Bell View Hotel
(A) 3f 4,000 & 4,400
(B) 31; 7, 000
(C 1 313 8, 500
1-25 Edo-machi TEL 23-0019
(2 Business Hotel Dejima
(A) 3!g 3,500
(B) 31g 6, 000
1 C 1 35 6, 600
2 - 13 Dejima -Machi TEL 24 - 7141
i3 Harbor Inn Nagasaki
(A 1 311 6, 000
1 B J 55 8, 000
(C) 87600818500
8 - 17 Kabashima - machi TEL 27-1111
6; Sakamotoya Ryokan
3% 12,000 (Including breakfast & supper)
2-13 Kanaya-machi TEL 26-8211

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Terada Ryokan
5% 6' 000
1-7 Gofu-machi TEL 22-6178
New Nagasaki Hotel
(A) 31510000
(B) 3E19000 to 20,000
(C1 3? 17,000 to 35,000
14 Daikoku -machi TEL 26- 6161
Business Hotel Ajisai Inn
(A) 3% 5,000
(B) 315 7, 000
(C1 5? 9,000
11-4 Daikoku-machi TEL 27-3110
Hotel Station Royal Ajisai
7 - 3 Daikoku i machi TEL 22 - 2222
Nagasaki Kenritsu Y. H.
7/10 to 9/10 & 12/1 to 3/31
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Other season
34 1, 850
2 Tateyama - machi TEL 23 - 5032
Century Hotel
(A)
1 B 1 3E 6. 000
(C) 35 12000
1- 26 Mezame - machi TEL 46 - 2222
New Urakami Hotel
1A1 I1\$4,500 to 4.800
1B1 3E 8000
1C1 2% 8.000
10s61wakawa-machi TEL45-1117
34

0 Park Side Hotel

(A) 31% 6,350

(B) 1% 11,000

(C) E1511.000

1-14 Heiwa-machi TEL45-3191

Room Rate ----- (A) : Single Bed

(B) : Double Bed

(C) : Twin Beds

Restaurants (see MAP 6)

C - costly, M - moderate, MC - moderate and costly

No.6) Shikairou(1EHE1%) Chinese Food

4-5 Matsugae-machi TEL 22-1296 MC

Q) T6kaen(195\$1i1) Chinese Food

9-9 Shinchii-machi TEL 24-2531 MC

C3) K62anrou11I UJ1%) Chinese Food

12 - 2 Shinchii - machi TEL 21 - 3735 MC

GD Ikesuu #1111) Japanese Food

3 Motoshikkui-machi TEL 21-7029 C

6) Ikeshio (t 43731) J apanese Food

13-12 DBZa-machi TEL 21-9190 C

6 Hihumi-tei(- -i ii?) Japanese Food

5 Motoshikkui-machi TEL 25-0831 C

\$ KawakuraUlH 15) Japanese Food

14-15 D6za-machi TEL 27-2900 C

(29 Ken1s('r y 1") Public Bar

3-13 Motoshikkui-machi TEL 22-9244 M

GD Ariran9tei(7 U 3 V15) Grilled Meat

13 D6za-machi TEL 24-3838 M

IO) Yuki SushiMJ '3 5%; L 1 Sushi

6 -4 Motoshikkui-machi TEL 23- 8582 C

C Unryu-tei1%E3-) Chinese ravioli

10-3 Hamano-machi TEL 22-4621 MC

02 MakinEE) Ordinary Japanese Food

6-23 Yorozyua machi TEL 23-4009 M

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Hamakatsu-bekkan (31%? 511%; 1 Japanese Food
6 - 50 Kajiya - machi TEL 26 - 8321
Ginrei(\$531 Western Food
2 Kajiya-machi TEL 21-2073
Sakura house (HE n r7 74 1 Western Food
64 15 Kajiyaaimachi TEL 26-0229
Shiramizu(L Bald;) Japanese Cakes
1 Aburaya wachi TEL 21 - 9770
Syarekatsu(L 471169)?) Ordinary Japanese Food
7 _ 29 Furukawa - machi TEL 21 - 9297
Yossou L 357?; 1 Ordinary J apanese Food
8 - 9 Hamano - machi TEL 21 - 0001
Keikaen1fi\$1i1 1 Chinese Food
4 Kajiya imachi TEL 24 - 7123
Chez vous1 42 1 '2-1 French Food
2 - 6 Manzai _ machi TEL 21 - 4394
Harubim M a 1:; 1 French or Russian Food
2- 27 Kozen - machi TEL 22 - 7443
Tsukimi-chayak H 5% 4%) J apanese Cakes
1 Kaminishiyama v machi TEL 22 - 6378
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Banks & Tourist Informations (see MAP 7)
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1-11 Ddza-machi TEL 24-1818
Mitsubishi Bank (bank) ,; i\$ff\$ 'ff
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Fuji Bank (bank) 5'th TI
3 - 28 Hamano - machi TEL 24 - 0156
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5 Yorozuya - machi TEL 22 i 2246
Nagasaki Bus Kank6 (bus) E1115 ': 7x E 36
2-10 Shinchi-machi TEL 23-8749
Kumamoto Sdgo Bank (bank) 5E 4:141 5E 11
7 Nigiwai # machi TEL 22 - 1274
Nagasaki Chuo Post Office (post office) EWE\$5Q\$M\$%
1 - 1 Ebisu - machi TEL 22 _ 3900
Nagasaki Station (station) \$121112ng
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77111 Daikoku-machi TEL 2173971
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Freedom from Nuclear Power Plants' Group Nagasaki
Network of Grass-roots Movement in Nagasaki c/o Kyoiku
Bunka Kaikan
2-1 Chikugomachi Nagasaki 850
tel. 0958-2274098
Network of Grass-roots Movement in Nagasaki
ditto
Education Correspondence in Nagasaki
ditto
Nagasaki Council of Korean Atomic Victims
c/o Cyosen Kaikan
15-2 Ofunaguraimachi Nagasaki 850
tel. 0958-236090
Hibakusha (victims) Health Card Membership Association
8929 Sakamoto-machi Nagasaki 852
tel. 0958-74479263
Nagasaki Atomic Bomb Casualty Council
2-28 Kozenimachi Nagasaki 850
tel. 0958-2679167
Welfare Hall
2713 Okamachi Nagasaki 852
tel. 0958-464739
Hot Spring Convalescent Home 1Daiwaso'
946 Kitahonmachi Obama-cho Minamitakaki-gun 854-705
tel. 0957-7742546
Convalescence Center 4Tateyamaso,
624 Tateyamaimachi Nagasaki 850
tel. 0958-276054
Inspection Center
2728 Kozenimachi Nagasaki 850
tel. 0958-726-9167
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Sufferers Organizations Nagasaki-Prefecture
8-20 Oka-machi Nagasaki 852
tel. 0958-44-0958
Nagasaki City Atomic Bomb
Survivors Health Management Center
2095 Fuchi-machi Nagasaki 852
tel. 0958 -25-5151
Atomic Desease Institute
12-4 Sakamoto-machi Nagasaki 852
tel. 0958-47-2111
Scientific Data Center of Amotic Bomb Disasters
ditto
Nagasaki A-Bomb Testimony Committe
18-4 H6ei-machi Nagasaki 852
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The Japanese Red Cross Nagasaki Atomic Bomb Hospital
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tel. 0958-47-1511
Nagasaki Teacher's Association of Children of Atomic Bomb Sur-
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Network of Grass-roots Movement in Nagasaki c/o Kydiku
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2 71 Chikugo i machi Nagasaki 850
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I. The History of Nagasaki

The name "Nagasaki" probably comes from Nagasaki Kotaro, who lived here in the thirteenth century. In the sixteenth century, the Portuguese, who were establishing trade with Japan, recognized Nagasaki's potential as a harbor so they asked the local lord, Omura Sumitada, to open Nagasaki, which was then just a village, as a trading port. Six towns were constructed in 1571. With the trade came Christianity and a good many people in and around Nagasaki were converted to Christianity. The profit of trade with Portuguese, who sailed from Macao, was so enormous that the port town of Nagasaki developed rapidly. The trading was brought under the licensing of Toyotomi Hideyoshi in 1592. Gradually, however, the government of Tokugawa period became afraid of the power that the Portuguese were gaining in Japan. An isolation policy was established, closing Japan to the outside world. Only the Dutch and the Chinese were allowed to carry on very restricted trade with Japan and only through Nagasaki Harbor. The Chinese traders were restricted to a walled settlement on shore while the Dutch were strictly confined to a fan shaped island which was built in the harbor and named Dejima. Thus for nearly 250 years, Nagasaki was the only window to foreign culture. After the opening of Japan in the mid nineteenth century Nagasaki continued its role of introducing foreign culture and technology into Japan for some time. Among these, Japan's first training school for sailors and first ingot steel factory were built here. They were the beginning of the modern technological industry in Japan and they developed into some of the major industries in Nagasaki today.

H. Nagasaki and Christianity

Among the many converts to Christianity in the late sixteenth century was the feudal lord Omura Sumitada. In 1580, he donated a tract of land, including what is now Nagasaki City and Mogi, to the Society of Jesus. Toyotomi Hideyoshi, growing fearful of the rising influence of the Portuguese and mindful of the danger such an acquisition by this foreign power, confiscated Nagasaki and kept it under his direct control. Hideyoshi also perceived Christianity to be the means by

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which the Portuguese were extending their power in Japan, so he banned the practice of this new religion. In 1597, 26 missionaries and Japanese Christians were apprehended in Kyoto, marched to Nagasaki and crucified on Nishizaka hill as an example. These martyrs came to be known as the 26 saints. Severe pressure on Christians was continued thereafter. Many devoted followers continued in their faith, retiring to remote regions of the area and disguising their rituals. These "Hidden Christians" kept their faith secretly for seven generations until their discovery after the opening of the country.

However, hard feelings toward Christians continued even after the Meiji Government was established in 1868. About 3,400 people from Urakami in Nagasaki were sent into exile to various places in Western Japan and tortured. As the representatives from many countries protested against it on humane grounds, this incident became a diplomatic problem. The Meiji Government removed the prohibition and the long history of oppression and persecution against Christians extending for about 260 years ended at last.

In commemoration of the freedom of their faith the Christians began to build a cathedral and the largest church in the Orient, Urakami Cathedral, was completed after thirty years. However, the atomic bomb which was dropped on Nagasaki exploded about 500 meters to the southwest of the cathedral, completely destroying it. At the time there were 14,000 Catholics living in the Urakami area. 8,500 were killed and many were injured by the explosion. In 1959 the present Urakami Cathedral was built.

III. The Atomic Bomb in Nagasaki

1. World War II and Nagasaki

From the Japan and China War beginning in 1937 to World War II in 1941, a large industrial area for munitions was formed in Nagasaki. In addition to its position as the nearest harbor to China, Mitsubishi Shipyards in Nagasaki, which had recorded the greatest amount of shipbuilding in the Orient, were considered advantages to satisfy military demands. On the west coast of Nagasaki port, factories for Mitsubishi Shipyards and Electric Company were built. Along the Urakami River there were the

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Nagasaki Steel Works, factories of ordnance, shipbuilding, and an electric company, and their related plants.

In 1942, the well-known battleship "Mutsu" was built as the quintessence of Japanese technique in shipbuilding at the Mitsubishi Shipyards. Before the atomic bombing of Nagasaki, there were five aerial attacks and the main targets were the city area, the dock area, Kawanami Shipbuilding Company and Mitsubishi Shipyards.

2. The Targets of Atomic Bombing

At the beginning of July in 1945, the atomic bombing committee listed Kyoto, Hiroshima, Kokura and Niigata as its targets. Having many historical buildings, Kyoto was exchanged for Nagasaki. Finally, Hiroshima, Kokura and Nagasaki were chosen as the targets, being among the most important industrial areas in Japan.

3. The Atomic Bomb was Dropped on Nagasaki

A unit of three B29 bombers was carrying the atomic bomb, the gauges, and the cameras for observation. On August 9, 1945, they reached the sky over Kokura. But they did not drop the atomic bomb because it was so cloudy that they could not confirm the target. Flying over the Shimabara Peninsula they reached Nagasaki, which was the second-choice target, at 10:58. Though the visibility of Nagasaki was also poor, they prepared to drop the atomic bomb by radar. The bomber carrying the observation instruments dropped three radiosondes with parachutes to record details of the power of the atomic bomb such as the pressure of the explosion and then, having sighted the Nagasaki Ordnance Factory and the Mitsubishi Steel Works through a rift in the clouds, they dropped the atomic bomb from a height of 9,000 meters.

4. Damages Caused by the Atomic Bombing

At 11:02 am. on August 9, 1945 the second atomic bomb in the human history exploded about 500meters above in the air over Matsuyama-machi in Nagasaki City. In a moment the temperature of the hypocenter reached several million degrees Centigrade. And it generated a fire ball

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of about a hundred meters in diameter. Its surface temperature was said to be about from 7,000°C to 9,000 °C. At the exploding point an immensely high atmospheric pressure was produced and became a blast expanding the surrounding air.

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1. Damages (The estimated population at the time was 210,000.)

Dead 73,884

Injured 74,909

People left homeless 120,820

Houses burnt down 11,574

Houses completely destroyed 1,326

Houses partly destroyed 5,509

(From sixty-five-year History of Nagasaki Municipality)

4-2. The Influence Effected upon the Human Body

When the atomic bomb exploded, it generated intense heat rays and a blast of wind and radiation was emitted. Its effects upon the human body were as follows:

1)

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Heat Rays

By the intensely emitted heat rays when the atomic bomb exploded, most of the people around the hypocenter were burnt to death. Those who were within 2km of the hypocenter were seriously burnt, and those who were within 4km were burnt on the exposed parts of their bodies.

The Blast

The maximum velocity of the wind of the hypocenter was 440meters per second. (Even in the case of a hurricane the maximum intensity can be just 80meters per second.)

Within 1km of the hypocenter wooden houses were completely destroyed and many people were crushed to death under those houses. And the ferocious blast shattered wood and glass into pieces and shot fragments all around like bullets. Consequently many people were hit and died from excessive bleeding.

Radiation

The most remarkable feature of the atomic bomb was the radiation emitted by the explosion. Radiation destroys cells. Especially fissionable and regenerative cells (hematogenous cells, generative cells, etc.) are intensely affected. In the

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open field, those people who were within 1km of the hypocenter - received a fatal dose of radiation. It is supposed that those people within 1.5 to 2.0km suffered severe physical damage by radiation. A large number of people searching for other members of their families or those on rescue missions entered the area of the hypocenter right after the bombing and were affected by residual radiation. And due to the wind direction and the configuration, black rain fell over Nishiyama district 3km east from the hypocenter. It contained a large quantity of radioactive fallout. The ill effects of the atomic bomb are complexly caused by the above three factors. Therefore, the condition of the injured became worse compared with in the case of mere wounds, burns, or radioactive poisoning. They are generally called A-bomb diseases.

a) Acute A-bomb Disease

A week to a month after the people had been atomic-bombed, peculiar symptoms of radioactivity began to appear. Even those who had no wounds or burns but have got strong radioactivity, became less energetic to produce white or red blood cells because of the complication in the blood forming organs (bone marrow, etc.), and finally became bleeders. It is at this period that they were mistaken for dysentery patients. It was rumored at this time that Nagasaki had many dysentery cases, because the victims had bleeding in their intestines and suffered from bloody diarrhea. In addition, however, falling-out of hair, fatigue, subcutaneous bleeding, menstrual disorder, appeared.

After a month, a gradual recovery of the affected bone marrow was seen, yet various symptoms apparently remained. Death caused by acute A-bomb disease continued for about four months until the beginning of December. Recently, it is reported that the number of deaths from radiation disease might have been more than had been previously estimated.

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b) The Late Effects of A-bomb Irradiation

There are many people who had suffered for a long time or have been suffering until now from external wounds or burns caused by the atomic bomb. We call such cases uA-bomb irradiation diseases".

Apart from the above, there are also those, who had not suffered external wounds or burns at the time of A-bombing, yet had symptoms, which were noticed sometimes later, that looked like those caused from the A-bomb, including genetic disorder. We call them iiaftereffects of A-bomb irradiation".

Five to seven years after the bombing, survivors, frequently had leukemia. However, about fifteen years after, cancer of the thyroid gland developed among many survivors. As the period of the development of the cancer is different for each type, thorough investigation and its medical treatment are necessary in this matter. Moreover A-bomb cataract, microcephaly caused by intrauterine exposure, etc. are also noticed.

As for the genetic effects, there have been many reports in medical investigations but deformity was not found to be significantly higher in the second generation of survivors as compared with the non-exposed. But further investigations are necessary up to the fifth generation to come to a conclusion regarding this.

5. Relief and Protection of Victims

The power of the atomic bomb was unimaginably strong compared with ordinary weapons. A single explosion killed and injured tens of thousands of people instantly. There were many doctors and nurses among them, and the whole city was thrown into confusion. There was no way to give even first-aid to the wounded for a while. The rescue parties arrived eventually from within the prefecture and near-by prefectures. They carried out emergency treatment of the injured along with the surviving of medical personnel in the city at the sixteen relief stations. However, they were in such miserable condition and the medical supplies were so scarce that the first-aid was rather rudimentary.

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(Radiation Damage of Today)

Radiation damage did not end with Hiroshima and Nagasaki. Even today the number of the radiation victims in the world is increasing because of nuclear tests and nuclear power plants.

(1) Nuclear Tests

1. Nuclear Tests in Bikini

In 1946, after evacuating the people of Bikini Atoll, the United States began there a series of 23 nuclear tests which were carried out until 1958. During the first hydrogen bomb test, which was carried out on March 1, 1954, the ash of death (radioactive fallout) fell on a Japanese fishing ship "The Lucky Dragon No. 5" sailing on the sea far away from the danger zone. All of the twenty-three crew members suffered atomic bomb diseases and one of them, Aikichi Kuboyama, died half a year later. In 1957, the residents of Bikini Atoll were allowed to return to the island, where much radioactivity still remained. Many people died of cancer or leukemia and there was an increase in the number of miscarriages and children born with birth defects. As a result, the residents left Bikini in 1985 and moved to another island.

2. The Downwind People of the Nevada Nuclear Tests

It is unofficially announced that the number of atmospheric nuclear tests in Nevada reached 100 from 1951 to 1962, when the partial prohibition treaty of nuclear experiments was made. In Nevada the tests took place when the wind usually blew to the eastern area, where the residents were scarce. However, a large quantity of radioactive fallout floated downwind to the southern part of Utah and the northern part of Arizona, where intensive damage occurred. Because of this fallout a high frequency of cancer, including leukemia, deliveries of heavily handicapped children and miscarriages were seen among the downwind people.

3. Atomic Soldiers

Not only civilians but also soldiers suffered from radiation

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diseases. In England 20,000, in Australia 15,000, and in the United States more than 250,000 soldiers were exposed to radioactivity. Many of them suffered from leukemia in addition to various kinds of cancer and genetic hazard.

(2) Nuclear Generated Electric Power

As for nuclear generated electric power, only the risk of accidents in power plants is not the problem. Trouble at the every stage of the nuclear fuel cycle should be considered.

1. Mining of Uranium

Even while uranium is being mined, damage occurs. In the United States most uranium has been excavated in and around Indians, residential areas, and the Indians were hired as mineworkers. A large quantity of radon gas and uranium dust has been emitted while uranium was smashed into pieces. It has caused lung cancers and other troubles with the respiratory organs. The birth rate of heavily handicapped children is high.

2. Nuclear Power Plants

In nuclear power plants the problem of workers who are exposed to radiation should be taken into consideration as well as the danger of accidents.

2-1. Accidents

a. Three Mile Island (Pennsylvania, U. S. A.)

On March 28, 1979, in the nuclear power plant on Three Mile Island, a large quantity of radiation leaked from the factory as a steel container was pierced, making a hole 50 centimeters in diameter. At first this accident was estimated as causing only slight damage. However, year by year the radiation effects became obvious. Many of the residents near there suffered from cancer, leukemia, and other radiation sickness. The rate of cancer in this area is from 7 to 8.5 times higher than that of other districts in Pennsylvania. Plants were also damaged by radiation, and many deformed or discolored leaves looking like gigantic dandelions were found in the vicinity.

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b. Chernobyl (Ukraine, U. S. S. R.)

On April 26, 1986, the 4th reactor in the Chernobyl nuclear power plant exploded and a fire broke out. Because of this accident, hundreds of millions of curies of radioactive fallout were scattered all over the world. 30 people were killed directly, about 300 people were hospitalized after 48 hours and more than 130 thousand residents took refuge.

Now, in Europe, effects of the radiation have been appearing. In Munich, abnormal plants, as in the case of Three Mile Island, were found. It is reported that in Berlin babies born with some congenital abnormality have increased fivefold since the Chernobyl accident. The radiation has condensed in food and food with a high level of radioactivity is appearing on the market.

Now, 36 nuclear power plants are running in Japan, and accidents often happened.

2-2. Labor in Nuclear Power Plants

Annual examination and daily inspection and maintenance are necessary to run nuclear power plants. Mainly, subcontractors are engaged in such works. They are sent to work in the terrible environment without enough knowledge about radiation. They are not informed of data about total exposure to radiation, which will be a key to claiming compensation. Not even a medical follow-up investigation has been done. Already 500,000 labor have been engaged in nuclear power plants. More than 140,000 of them have been exposed. Several hundred people have died and many people are suffering. Nevertheless, the standard of permissible exposure for labor in the nuclear power plants has been loosened.

3. Reprocessing of Nuclear Fuel

Reprocessing extracts the remaining uranium and the plutonium, which has been created during fission, from spent nuclear fuel rods. Radioactive gases are released into the atmosphere during the process, and highly radioactive liquid waste is left in the end.

During the reprocessing, a nuclear fuel reprocessing plant scatters many radioactive substances into the environment every

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day; in fact the radioactive wastes discharged from such a plant in a day equal those from a nuclear power station for one year. For example, a reprocessing plant in Windscale, England, released a great quantity of plutonium into the sea, and contaminated the seaside for forty kilometers. There is evidence that myeloma and lymphoma are increasing among the people in the area, especially leukemia of children under ten, which is ten times higher than usual. Despite all the objections, such a plant is being planned at Rokkasho in Aomori Prefecture in Japan.

4. Care of Radioactive Wastes

Radioactive wastes are left after each process of the nuclear fuel cycle. It is very difficult to dispose of them safely. And there is no safe method to dispose of the highly radioactive liquid wastes which remain after reprocessing. At present they are stored in stainless steel tanks. Yet they have to be kept for at least 500 years and no one is sure these tanks will hold that long. There are some other ideas on how to store the wastes such as solidifying them, but none of these processes are near to realization. Even if solidification were possible, no one is sure how safely we could store these solid wastes either.

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(Commentary)

Foreign Victims)

Among victims in Hiroshima and Nagasaki there were many people from abroad. From Korea, which had been annexed to Japan as its colony in 1910, many people had been brought as forced labor. Their number increased during World War II. The number of Korean atomic Victims is considered to have been several tens of thousands. However, the exact number of those killed and most of their names cannot be identified. The end of the war meant liberation for the Koreans. But the "discrimination" against them still remains. Such discrimination makes their lives in Japan difficult. Especially, many Korean A-bomb survivors have had hard lives without official support. In addition to Koreans, foreign missionaries and sisters, students from Asia and the Pacific region and war captives (from the United States, England and Holland, etc.) were also exposed to or killed by the bomb.

(Nuclear Fuel Cycle)

In theory the nuclear fuel cycle begins with the mining of the uranium then proceeds to the production of nuclear fuel, the generation of electric power, the extraction of uranium and plutonium from spent nuclear fuel, the reuse of these for fuel, and the care of the radioactive wastes. This cycle needs a fast breeder reactor which produces plutonium efficiently so that it can be reused as fuel. As development costs soar, this new type of reactor is getting further from completion. Even if the reactor is completed, the cost of generating electricity will be 1.5 to 1.8 times higher than a light water reactor. Therefore, the prospects of this step in the cycle becoming profitable fade. Also, a safe disposal method for the radioactive wastes has not been developed yet.

Moreover, the uranium concentrating techniques and the reprocessing techniques used in this cycle lend themselves to being used in the making of atomic weapons.

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Nuclear Fuel Cycle

In each process, there are many mining of problems such as radioactive uranium contamination of the environment and radioactive exposure of labors.

production enriched uranium of nuclear fuel

nuclear weapon

plutonium

nuclear power reprocessing

plant spent nuclear plant

atomic

waste waste

A-Bomb Witnesses

A-Bomb witnesses are hibakusha who speak out about their own experiences. For many years most hibakusha have been reluctant to speak. Now, feeling that the world is on the verge of a general nuclear war, and becoming aware of their own advancing years, they have begun to tell of their experiences.

Cancer

The incidence of cancer among survivors began to increase beginning in 1960. Cancers which have been recognized to have been caused by atomic bomb radiation, include thyroid, breast, and lung cancer. Several investigations have shown that death rates from cancers such as the salivary gland, esophagus, stomach, colon, urinary organs and bone marrow cancer were significantly higher among the exposed survivors compared to the

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unexposed population.

Black Rain

After the atomic bombing a rain with black soot fell. It contained a large quantity of radioactive fallout. Because of its color, it is called "black rain".

(Doubt on the Atomic Bombing)

At the time of the atomic bombing, Germany had already capitulated to the Allies, and main cities in Japan had been almost completely destroyed by daily air raids. On August 6, 1945, the first atomic bomb had been dropped at Hiroshima. Moreover on August 8, the U.S.S.R. invaded Manchuria, and the second atomic bomb was dropped at Nagasaki.

Generally speaking, the justification for the atomic bomb dropped on Hiroshima and Nagasaki, is based on: "A quick end to the war and saving human life". On the other hand, there is a critical opinion that "even if the atomic bomb hadn't been dropped, and Manchuria hadn't been attacked by the Soviet Union, Japan would have yielded by the summer or fall of 1945". From a report on the investigation of the American strategic bombing of Japan, it was considered that Japan would surely surrender by November 1st, or before the end of 1945".

(Two Hibakusha Laws)

The Survivors Medical Law, enacted on March 31, 1957, provided for free medical examinations and treatment for all certified survivors.

The Survivors Special Welfare Law, enacted on May 20, 1968, guaranteed the general welfare of certified survivors.

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II Invitation to Surrender

There is a strong opinion that handbills foretelling the drop of the atomic bomb and inviting surrender were not scattered before the atomic bomb was dropped. According to a military police report, handbills were scattered at midnight of August 9th in Nagasaki City just after the atomic bombing.

On the other hand, it was also reported that the handbills were scattered, but handed to the Justice Ministry and their existence was then hushed up. Also radiosondes were dropped at the same time as the atomic bomb. A letter to Professor Ryokichi Sagane at Tokyo University was hidden inside. It was a letter of invitation to surrender written by his friends from his school days in the United States. The letter told him to inform the Japanese leadership about the destructive power of the atomic bomb to encourage their surrender.

(Residual Radiation)

Besides the initial radiation within one minute, there was residual radiation which was emitted for a long period of time. Those who were not exposed to the A-bomb directly became A-bomb victims through secondary exposure to residual radiation when they entered the cities after the explosion.

Initial Radiation

Gamma rays and neutrons were radiated in large amounts during the first minute after the explosion. These two were collectively called "initial radiation". Because this initial radiation had the power to penetrate deeply into substances, it destroyed living cells in the human body.

Disorders among Children Exposed In-utero

Some children were born to women exposed during pregnancy. These children are considered to have been exposed in-utero. Some were strongly affected by atomic bomb radiation in the same way that some survivors exposed during childhood were affected. Malformations such as microcephaly, inborn heart disorder, and mild hypoplasia of head circumference, height and weight occurred among those exposed in-utero. According to an investigation in 1960, there were 2,310 of such cases in

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Hiroshima and 1,562 in Nagasaki.

(Units to Measure Radiation)

1. Rad, Gray (Gy) (Units of absorbed dose)

Rads are units used to measure dosages of radiation absorbed in substances physically.

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2. Rem, Sievert (Sv) (Units of dose equivalent)

Each type of radiation effects to the human body differently, even if it absorbs the same dosages of radiation.

Rems are the standard corrected units used to measure the dosage absorbed by the human body. The dose of radiation a Japanese receives from the natural environment amounts to about 100 millirem per year.

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(Example) X-ray; 1rad 2 1rem. a-ray; 1rad 2 20rem.

3. Roentgen (R) (Unit of exposure)

Roentgens are units used to measure dosages of X-ray and/or gamma-ray exposed to substances. They indicate amounts of electricity generated by X-ray and/or gamma-ray in the air.

1R = 0.95rad

4. Curie (Ci), Becquerel (Bq) (Units of radioactivity)

Curies are units used to measure the intensity of radioactivity by numbers of nucleus broken in one second.

1Ci: 3.7 x 10¹⁰ nuclei/second.

1Bq: 2.7 x 10⁻¹¹ 021 nucleus/second.

(The Three Non-Nuclear Principles)

The three non-nuclear principles are: no manufacture, no possession and no introduction of nuclear weapons. According to the Japan-US Mutual Security Treaty, the United States must consult the Japanese government before bringing any nuclear weapons into the country. Because there has never been any such consultation, the Japanese government declares that no nuclear weapons have ever been brought into Japan.

(Hibakusha Relief Law)

Many survivors desired the enactment of this law which would compensate or provide aid to survivors and the families of

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victims of the A-bombs. This law was designed to supplement two already existing laws.

IA-bomb Health Book1

A-bomb victims covered by the Survivors Medical Law were: 1) those who at the time of one of the bombings had been within approximately 4km of the hypocenter or in black rain areas; 2) those who entered within 2km of the hypocenter within two weeks after the bombing; 3) those who worked for rescue teams or were involved in the disposal of corpses; and 4) the fetuses of survivors who were pregnant at the time and who fall into one of the above categories. Under the law A-bomb victims receive health books if their claim under the above criteria is corroborated by two witnesses.

(Comparison with Hiroshimais Atomic Bomb)

The bomb dropped on Hiroshima was made from Uranium 235 and that of Nagasaki was made from Plutonium 239. Generally, the energy of an atomic bomb is calculated by the amount of equivalent TNT explosive. It is assumed that the Hiroshima bomb was 12.5 kilotons and the Nagasaki bomb was 22 kilotons. But as for present nuclear weapons, the energy levels are one to several hundred times the above.

IPress Code1

After World WarII the occupation forces imposed a press code on Japan to carry out their policies easily. Until 1952 it ruled over Japanese newspapers and magazines as an absolute law. Especially, reports and commentaries of A-bomb damage were restricted with censorship to keep information on A-bomb secret from the Soviet Union.

(Biological Concentration of Radioactivity1

In the Colorado River in America near the Hanford reprocessing plant, a radioactivity level a million times higher than the water in the river was detected in the yolk of water fowls' eggs.

3.3%ng
%:m EMEW

0x128 W
Twig??? 17-5,? 'v
\$EQHEMEEQMWN
okEluoa
o\$glai&\$ #1;0'9
D11 uas (M)
091gya 3mm u WID731Q/g9 (4(0324:
#ngq A :7?4;\$%gq Win92? U \$E&Xt-Ef: 1W:
062;? u 17F4JEQFFIV '11?
cyHanamww% HDEQEEW W9\$m
oTFl\$lx17LEQLEiBiWEEWFHE 1142(0 32190 I631 (V)
0.?71FJ/yJ1'1F-J/J TALJIW-AJ
031M\$m53u?#\$3mmxr4y4Wiigqqagg m
Ormwuwaw 5% 9:52: ma (2)
oTIWIIiEETQEWE'c 441 1&0Ef&/1FHEE::SZEI 11E Erma (1)
E51 FEE
EwEaEEQ:

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#QIi

h'a
ICBM(ai shi bi emu) Intercontinental Ballistic MissileUtl1ZEFaEl
51545 i 15 T w) (tairikukan dandb misairu)
EEHEJ (aogiri) a young paulownia tree(Empress Tree)
Ema; (aozora ky6shitsu) class held outside
??%5/ (akachin) mercurochrome
E'IEHEE (akusei shuy6) malignant tumor
30% (ashi n0 ura) sole of foot
E05? (ashi n0 k6) instep of foot
717- (YqLiERE) (asuta/ taisen gyorai) Anti-Submarine
Torpedo
7X D -/ 7 (\$11520 0' v F) (asurokku/ taisen roketto)
Anti-Submarine Rocket CASROC1
ASEAN Laseanl Association of South-East Asian NationskEEE
7 3/ 75% it'JjEEm A5 Ltbnan ajia shokoku rengbx
EiEj5% (appakukan? oppressiom f: Z11. it E 5
355 (ato1 site: lH/XH& 1ky171honshai site of former head-
quarters
7/le hN'f 1%ng (aparutoheito j6yaku5 International Con-
vention 0n the Suppression and Punishment of the Crime of
Apartheid
7% ') hEX\$E%E% 1amerika kokka uchu iinkai)
National Commision on Space1NCSE
%% xangm secret code
?%RIP\$%4J xanzen hosho joyaku1 security treaty
?%5%F\$1E\$% 1anzen hosho rijikaiv Security Council
BE\$\$\$\$\$5 (anchu mosaku surut to grope
V'i
4-7)L\$IEqEI\$E Liguru sentokix Eagle
bfrfi' LikadaW raft
EE (igan) cancer of stomach/gastric cancer
igEot (ikinokottai survived: HBJ'FQ 1ch6min1 residents
who survived
4 3F U XIi-riiEEt/Q- 1igirisu kokuritsu uchii senti)
British National Space CenterLBNSO
7 ()1) 7
. 1.

VI'HCi (ikenie) sacrifice: wolng; (ni naru) to be sacrificed to (the A-bomb)
53% (ikotsu) ashes left from cremation/ human remains
EEK? (ishikai) medical association
6% (ishizue) foundation/cornerstone: ??UUDx (heiwa no)
cornerstone of peace/ foundation of a peaceful world
31E?5 (ishoku suru) transplant
iii? (izoku) bereaved family
-lk7j\$(Ejif\$ (ichiji h6shasen) initial radiation/ initial radioactive rays
_?EBE\$\$ (ikkatsu k0shB) package deal
-\$(:9&5 (ikkyo ni ushinau) to lose at one stroke: IEJE-fu
dEx (nikushin chiki o) to lose one,s family and all one's friends at one stroke
-W(ZLECZ) (isshun ni okoru) to happen in an instant
-&&L\$\$(% (ippan ky6sho) State of the Union Message
-75E14JZ\$_T'ZEE (ipp6teki dokuritsu sengen) Unilateral Declaration of Independence (UDI)
Eff: (iden) heredity: xif- (shi) gene/KB'inZQ (teki eiky6) genetic effect/XFV-JIF;5:'3;Z (teki shbgai) genetic hazard
??EEQICBM (idBShiki ICBM) mobile ICBM: xiEarHa
I (hassha dai) mobile ICBM launcher
#F7k (ido mizu) well water
ELK? (ihai) plate giving name of deceased person
Lb535 (iburu) smolder
HEW (ireihi) memorial monument/ memorial cenotaph
Aha? (ireba) denture
"BEE (into) pharynx IfaErizksl
"Eigi (int6en) pharyngitis
4 h/ F#EW%%E& (indo uchu kenkyu kikan) Indian Space Research Organization (ISRO)
Ife/ b-JLEJrE (intoru keikaku) International Tokamaku Reactor(IAEA T?NJNO eafirimc/EUWE'EQW (Ih 71 V 7&1!) Wlk1
EEJEIHJEEH
e
9'U
5 1L (uji) maggot: x/JthEQL'figt/)f%ljil%e 563347. L f; Many maggots were breeding in the wounds of the victims.
& 93 7

\$\$\$F55%%E% (uchu kaihatsu iinkai) Space Activities Com-
mission
\$EBE\$\$\$E (uchu kaihatsu jigyo6 dan) National Space
Development Agency lof Japan1 (NSDA)
\$E\$4\$ER%FR ruchil kagaku kenkyisho) Institute of Space
and Astronautical Science (ISAS)
\$EQ\$\$ (uchu sensd) space war
\$E\$Ei (uchi hik6shil astronaut/cosmonaut
\$EI\$EEUVX71A (uchfl b6gyo shisutemui Star Wars/SDI
53% (umi) pus/discharge
15\$ (umeboshiJ pickled plums
i\$if\$i furakami tenshud6x Urakami Cathedral
r73:'7Ai\$9\$ (uraniumu bakudanx uranium bomb
r75) turanl uranium
r75);)%.%%lia% Vuran n0shuku 1(6ij uranium-enrichment
plant

—
Z'e
ABCC xei bi shi shi1 Atomic Bomb Casualty Commissionle
(131.: UIZIHWEI%3%W'V6VWE khoshasen eikyo kenkyu jok LRERFH
I4 7((?&X'IE%\$2E11;2\$) keizquotensei memeki
fuzen shoko gun1 Acquired Immune Deficiency Syn-
drommAIDS
%EHE\$E& xeisei geigeki shudant Satellite Interceptor
?%EIKEQE teisei kokeki eisei) Hunter-killer Satellite/ Anti
Satellite InterceptionASATx
75(13EPEZEI teisei churitsu koku v Permanently Neutral State
?EEEM%%E xeisei hakai eisei) Killer Satellite
1/7; ft mguzose ExoceU V '7 / 7x JTVTWP%%U\$M 5 ML f 'L)
Air Launched Cruise Missile of France.
55145: xeppeil general inspecting of troops
SDIKE%WJ%\$FE) ksenryaku boei kosov aesu di ai)
Strategic Defense Initiative
NGO i1 ' 'rtiaEijaiiE tenujio kokusai gunshuku kaigi) NGO
International Conference on Disarmament
131'le 1?- xenerugit energy
— 94 , ,

35-0

HIEUi (6to) vomitting

kHi'eEEJBER (6mura kaigun by6in) Omura Naval Hospital of Japan

FE%JI%IEE3'5 (6kyflshflri o suru) to repair temporarily / to take makeshift measures

F5%% (6kyiteate) first-aid / first-aid treatment

53%;? (osen) contamination: N'f E) (Nsuru) contaminate

\$53.3?Zf (omusubi) rice ball: x713EdSEiiLf; (ga haikyi sareta) Rice balls were distributed.

mag (orizuru) folded paper cranes

EQE\$EVX?A (onky6 kanshi shisutemu) Sound

Surveillance System

7'2Hka

55\$555\$Eagi\$ (kaigun kaiyb kanshi eisei) Naval Ocean Surveillance Satellite (NOSS)

\$E\$EEJEEI (kaigunshf) chbsadan) Naval Surveillance Team

55\$J7F5I17d6 (kaigun bybim naval hospital

SEEJTEiEE (kaigun heigakko) naval academy

532E??? (kaigenrei) martial law

9ffx)lz_b (gaikd riito) diplomatic channel

iiiagilli (kaijii jieitai) Maritime Self-Defense Force

EEiEK\$ZEiEE\$ (kaijo renraku kbtsuro) sea lane of communication(7 w 1/ - y)

?H% (gaish6) external injury: fo'lng'ikx (ga mattaku nai) no external injury

RE (kaijin) ashes: xCLWT mi kisu to be reduced to ashes

??AEBV (gaijin butai) foreign legion

fTA (kainyu) intervention

WEN Kkaib6) anatomy

Em (kaimetsu) annihilation: VINE Ljokyo) disastrous situation/ 4%; L (x131, (isshun ni shite suru) to be flattened instantly / to be demolished in an instant

Elam (kairan ban) community bulletin / circular bulletin
gztm Kkae chi) substitute lot
X& (kaen) blaze: ijEth) (ni owareru) to be chased
by the flames/SgELth0x (kurui tatsu) terrible blaze
Hifimff (kagaku gijutsu chm the Science and Technology
Agency
1133-422; (kagaku heiki/ chemical weapon
Xii (kakyfl) fire ball
#2 (kaku) nuclear: xiiUfQj (kinkb) nuclear parity/ x7 1 lb 5 -
(sherutzi) nuclear shelter/ 6%; tjikken) nuclear test/ x
With t_senjutsut nuclear tactics/ NEQEM (senryaku) nuclear
strategy/ xgiiiEE 4dant61 nuclear warhead/ NWWH (nenryB)
nuclear fuel. irradiated fuel/ wtiai (bakuyakui Atomic
Demolition MunitionstADMx / eaaai thbdanl artillery-fired
atomic projectiles/ xf%iLtj rhoydkokut nuclear-armed na-
tions/ e U tryokux nuclear force/ x055 (no fuyu)
nuclear winter/ eNkHE ino jidai nuclear age
\$XI\$)L#-E\$ Lkaku enerugi sangydr nuclear power in-
dustry
\$2EE\$IWEK%\$U tkaku kakusan bbshi jbyaku) Nuclear Non-
Proliferation Treaty (NPT)/ Treaty on the Non-Proliferation of
Nuclear Weapons
EEEWigfanj kkakujitsu hakai nbryokui assured destruction
capability
\$%iW%\$E%IE3-i\$3\$XESHEE/xnggngiE42? xgakujutsu
kenkyu kaigi genshi bakudan saigai chosa kenkyu
tokubetsu iinkaiv Special Committee for the Investigation of
A-bomb Damages of the National Research Council of Japan
??WEEJEEH xgakujutsu chosadant Scientific Investigation
Team
BEEEW%\$&B% tkakusho hakai senryaku) assured destruction
strategy
\$2\$i\$5jiiti%lb28m%ii xkaku senso boshi kokusai ishi
kaigir International Physicians Conference for the Prevention
of Nuclear War
\$\$\$QE\$\$\$JZEE E #4)L Lkaku danto t6sai geigeki misairu)
nucleartipped interceptor missile k
\$ZW\$4E%EEI% Lkaku nenryo saishori kojot nuclear fuel
reprocessing plant

EMISHEWDEmIE (kaku nenry6 no saishori) recycling of
nuclear fuel
gmmga; (kaku kakun6 y6ki) reactor container
fifigk (kaku bakuhatsu) nuclear explosion: ?EPx (kichh)
nuclear air-burst/ 7JWWN (suichi) underwater nuclear burst/
11(th (chika) underground nuclear burst/ PHBEN (chihy6)
surface nuclear burst
EQEQ (kaku bunretsu) fission: NHEBSWU (seisei butsu)
nuclear fission products/ETEr/DW (shi no hai) atomic dust/ash
\$2Ji\$ (kaku heiki) nuclear weapons/ nuclear arms: x1%%&
(haizetsu) total abolition of nuclear arms(weapons) / xJE-E
(k0) nuclear weapons magazine/ 0(\$%%1\$ % (n0 bakuhat-
su kibo) nuclear yield/ xmthilk (no mochi-komi) in-
troductiion of nuclear weapons
fir??? (kaku yugo) nuclear fusion
XX (kasai) fire: x/Jiisiiii) (ga osamaruk) fire dies
down/ Xx (dai) conflagration/ x0)9%41 (no hassei) out-
break of a fire
#3517: (kasabuta) scab/ crust
5E%1JX#QU ((kajb satsuriku) holocaust
iJVNCEE LT (kasukani iki o shite) still breathing faintly
X\$ (kas6) cremation
1%?ng (kasd tekikoku) imaginary enemy
H&EE (kataashi torii) One;legged Torii (Torii is a Shinto
shrine arch/ gate)
-1Q((katamuku) to tilt: rZE/JIR tie ga) house is tilting badly
1131111 (kakketsut hemorrhage of the lungs
?%IIE%7J%U%E% (gasshukoku genshiryoku kisei
' iinkai) the U.S. Nuclear Regulatory Commission (NRC)
Egugrs (katari be1 A-bomb witness
'%f1E1E%LJEF%\$Z%\$EE (kakko yddo takaku danto))cf. (muggy;
1% 5%7FZ'WHE (kobetsu yudd takaku danto)
1717'7 .%43%%2% Kkanada kokka kenkyu kaigi) National
Research Council of Canada (NRCC)
Xian Lkanetsu) heat: MLYMUMUL (ni aburarerur to be
roasted by the heat
9(an fkaho gataw gun-type
1X\$ xkayaku' gun powder
#043 tkayu gruel

jiaz (garasu) glass: x0ffE3EEEi% (no hirai hahen) flying
pieces of glass
QWNSM (karada no kizuato) scar: 53f;&3& Elbittcbv Eb
x (futame to mirarenai hidoi kizuato) frightful scars
91:01:35 (karada no fuch6) deteriorating physical condition: xEE
7L 3,) (o uttaeru) to complain of a deteriorating physical condition
(EU) (kari no) temporary. makeshift: MEI? (kenchB) Tem-
porary Prefectural Government Office/ x%1&? (butai)
makeshift stage
#7ng (gareki) rubble: x(DBI (no machi) ruined city
IEEEJ (.kareha zai) Agent Orange/ defoliant (dizf6uliant1,
herbicide
)II'NJ (kawaberil river bank
77)7i)L- (kangartix AS-3 Kangaroo L/ E?E#I%\$fj\$m i 4-f-/f
r, (soren kuchfl hassha junkf) misairw Air Launched
Cruise Missile of the USSR)
I%i%i%;% (kankyf) osenx environmental contamination/ en-
vironmental pollution
EEii3f\$EE xkankyo h0g0 environmental protection
EQFE kank0cho x government agencies
532%127M&V t_kanjusei ga tsuyoil to be susceptible bos&p-
tablel: V(WiEJ; 13H T thoshano ni taishite) to be
susceptible to radiation
\$535- zkanshol interference
gfiitt% xkansho chitai: buffer befnr1 zone
HKtwling xkanjo yusokii Carried On-board Delivery(COD)
TEE kkanseb inertia
'fg'liMiiiEE xkansei koho sochii inertial navigation system
55% akansetsui joint
52%; xkansenx infection
EEEWE xkansoku kik observation plane
Hm kanzo liver
ma ukantai'x fleet
%EEIKX?\$iEiEfE:/Xf/A lkantai eisei tshshin shisutemu)
Fleet Satellite Communication System x
kEKXi-WEESEEBL4JL nkantai gata dando misairuN Fleet
Ballistic Missile
Eitqlilkiia x'kan taiheiyo kosoi Pan Pacific Concept
7087

EXSF5\$3H5EE (kan taiheiy6 g6d6 enshi) Rim Pac
7fx7\$\$ (ganma sen) gamma hgaemal rays
5'ki
51E (kiatsu) atomspheric betmasferik1 pressure
we: (kikanshi) bronchus ibrimkasJ
Xbxggz; (ki ga shigeru) tree has luxuriant ILxgzjuoriantJ
foliage Houliid31
91%(3233'5 (kiga ni hinsuru) to be on the verge of starva-
tion
Egg (kiki) crisis U(raisisL x5619???) (0 dassuru) to pass
the crisis
1%??5 (kikyu suru) to long for
KHZ (kizai) apparatus kiapareitas, vrei/-reg1
,%% (kikei) deformity/ malformation: xLE (jiJ deformed
child
let (kizamu) to carve. inscribe iinskraibL engrave: Wux
(hi ni) t0 inscribe on a monument
.EWIS? (gijutsu in) Technology Agency: xgkifffil (chosa
5 dan) Technology Agency,s Survey B a :vei1 Team
\$1ng (kisho eisei) meteorological satellite
iSillfiR (kisho j6ky6I weather conditions
%LS#4JL%ETJE\$IJ91-7Lx (kijo misairu hassha kansei
shisutemuI Airborne Launch Control System (ALCS): x 4; y
51 - (senta) Airborne Launch Control Center (ALCC)
\$RE (kizbl donation NouneiSanL x'fE) (suru) to donate
gimb-ZYULE5% (kichi hantai tosb) anti-base campaign
1&E133\$i_ E #4)L (kid?) dando misairul Maneuverable Re-en-
try Vehicle (MARV)
EEEJEBQ (kido butaiv task force
itjCEi\$\$\$'9%% Lkita taiseiyo joyaku kikbl North Atlantic
Treaty Organization (NATO)
4: v % x/ (kitchinl AS-4 KitchenlV,15Ee'191fl?fEf3ijfj#ff(i %f I:
(soren kuchu hassha junkb missairul Air Launched Cruise
Missile 0f the U. S. S. R! cf. 77 y #1 a -
4 9!) 4

37:: tkinen) commemoration: N??EEQ (shisetsu) memorial
facility/ xiii (ju) memorial tree/ NEE?- (hi) monument
FIFE? (kino) function: xELUIfETZg (o kaifuku suru) to
restore the function
5(7):? (kinoko gumo) mushroom cloud
E&EE (kibaku s6chi) triggering device
#5325; (kydentai) rescue party/ relief team/ rescue squad
bkwild/skwaalz xi (in) member of a rescue party
#EEFQ (kyiientei) rescue boat
?IEFHEE (kyfl kyfl y6hin) first-aid kit
ikeEFE (kyflgo sh0) first-aid station. relief station: L?Bifw
trinji temporary first-aid station
\$532532; (kyien katsudb) relief activities
fa'liiLEg nkyusei sh6gai) acute sickness
lB\$IJcPfiJEE 4kyflsei chhgakkw middle school of the old
system: &\$(\$?2 (to jogakkb1 middle school and girl's
school of the old system
17k\$i75k\$47 (kyusen joyaku1 cease-fire agreement
1? 1-H E #4)LEHE kauba misairu kiki) Cuban Missile Crisis
1? J - U - kaurh curiekEQIE-T\$EW%E3EiuT%ff/. : unit of
radioactivity J
\$\$\$\$\$IE Kkyogi jikm agenda
,it;%rn;c Rkyosai byoim welfare hospital
9&\$UHE)) kyosei rodow forced labor: %3ilJi%FT%iLi'%Eml/&fl
'hl fr W JM/ (kyoseirenko sarete rodo ni juji shita chbsenjin):
Koreans who were brought to Japan for forced labor k
??BZ%% xgyosei kikam administration facilities E
5 g 5 5 (& 5 1kyochikuto) Pink Oleander
itEtDter%lE ky0tsu no anzen hosho) common security
MW xkyoqu terror: 0)%)(%1' mo kinko) balance of terror
#9%% xkyomeishax sympathizer bfmpa/IaizaH
T2937) xkyoryokul combined effort: x If: shite) through
the combined efforts I
?PEH'Feb') / 7 xkyoka sado rinku) Permissive Action Links
(PAL)
E702 kkyodai n3) gigantic: '/: 49; '%%: (de bukimi na)
gigantic gruesome gruzsnmv 1:4 ,(iIW/t LE ((16
bukimi na kinoko gumOA gigantic gruesome volume of
clouds like a poisonous mushroom
HM) 7

IEMHKEE (kyodatsu jdtai) state of lethargy He0ard 3 i1: E&LBI/EJ
Z9 (ni ochiiru) to be thrown into a state of lethargy
(EEEE (ky0y6 ryb) maximum safe dosage
QE (gyorai) torpedo: xgg (tei) torpedo boat
152%E (kirai) mine
??IVEEE (kirei na heiki) clean weapon
E83 (kiroku) documentation (dokjumentEJSm/ dak-1: EEWE
UDN (genbaku higai no) documentation of A-bomb damage
EEKEEHIEEJEE (kinkyfl kyflgo han shutsud6 y6sei)
emergency rescue requests
.Vggggsagm (kinkyfl tenkai butai) Rapid Deployment Force
(RDF)
EEEW (kincho kanwa) detente
EEEffi (kinrf) hbshi) labor services
t
E
(-ku
Eioht (ku o tsukamu) to grasp at straws
EEIE (kflkyo kan) hopelessness/ desolation: i'ahw L_fukai)
complete desolation / hopelessness
EEEEEE (kugun eisei tsushin? Air Force Satellite Com-
munications (AFSATCOM)
EE (kushu) air raid: x????fi nkeihoi air-raid warning/ 4x1:
(N (hondo) full-scale air raid
EXTEE #4)L (ku tai ki misairu) Air to Air Missile
EEWJESEE #4)L kku tai chi dando misairu) Air to SurE
face Ballistic Missile (ASBM)
2%in #4 JL (ki tai chi misairur Air to Surface Missile
(ASM)
EEEEKEEI9ZEA (kuchu keikai kansei shisutemu) Air-
d borne Warning and Control System (AWACS)
EEP\$f (kuchu senw air fight/ dog fight
EEQEEWX (1g) Lkuchu soki keikai (ki)n Airborne Early
Warning (AEW)
343%? (kuchu tesiatu) air patrol
E\$E#MME #4)L (kuchu hassha junkd misairur Air
1 Launched Cruise Missile (ALCM)
7 101 i

7-??- (kudeta) coup d'etat (kuzdeitizl
fgftt (guhatsu) contingency
f.%%151E (guhatsu kbgeki) accidental attack
fS5E\$1\$ (guhatsu senso) accidental war
EEEE ?kukaku seiri; readjustment of city lots
\$\$UD7K (kusu n0 ki) camphor Ikalemfad tree
SEiZiE (kuchikukan) destroyer
E&i (kumon) agony beganil
#iEjEfQE (kuyo ireisail memorial service
'7 U 79 h /85 (kuriputon 85) Klypton 85
EVE??? (kuroi ame) black rain
ECHEEQS akuro koge shitaix charred bodies
Efiii (gunkan) warship
Elilfi (gunkoku shugi) militarism
E&Eaaifhlj xgunsan fukugd taiseil military industrial com-
plex k
E\$ (gunjii military: xffib (kodbx military action/ dam?
(kybteiW military pact/ x 35% tshisetsul military establish-T
ment/ iHJ. Lshishutsu! military expenditure Uksp(3.nd9t891/E
\$931 joyakuh military treaty/ x 1x I) :1 Va 9 -:
xherikoputat medevack (mednva'Ekh f1 f%%\$iH1 #5 V31
helicopter for evacuation of wounded s
E\$f3i\$ tgunji eiseix military satellite: wag; K?AE
ktsushin shisutemux military communication system
Eggsga) xgunji yusen n0 guns-before-butter: xlfjxgE
seisakw policy of gunsbefore-butter
\$\$\$E/fk/i-TE xgunshuku iinkai kaigit disarmament con-
ference
E%IfE% kgunju kojol military supply factories
Ema tgunbix armaments: x??,imi xkanri? arms control/ xmiiii
sakugenk reduction in force/ 11;1JFJ% tseigenw armament
limitation
\$1\$3\$\$ xgunbi kyosow arms race
(T'ke
%K%\$E lkeikai keihOK air-raid alert
E% E #4)L xgeigeki misairui interceptor missiles
, 102 ,

\$Efgt7) (keishb no) slightly injured: xi? (mono) the slightly injured
Q7165 (keisuiro) light water reactor
KikTBefFa'i (keizoku jikan) duration
?IWEI (keib6 dan) citizenhs defense reserve
5- ML (getoru) a pair of puttees / leggings / gaiters
("Mi (kega) wound Nuzndl: x???) (0 suru) to be wounded
EEEEiEjj (gekiha ndryoku) destructive capacity
\$51!ij (gekirei no) encouraging: xiii: (kotoba) encourag-
ing words
TEX (geta) a pair of clogs / wodden sandals
1mg (kekkan) blood vessel
IIII/Mli (kessho ban) thrombocyte U/rambousaid
BEE??? (gekkei ijd) menstrual disorder
HEEQE (gekkei konnan) dysmenorrhoea Mismenorizaj
H&Jg (gekkei tsd) menstrual pain
3&\$& (kessen) decisive Misaisiv1 battle
EOE (kemuri no hashira7 pillar of smoke column
Tm (geri) diarrhea
"f U 3 (gerira) guerrilla
71:14 F (keroido) keloid/ scar tissue
Ei-E 3%??9 igengo ni zessuru) beyond description
\$522113 (genzaichi) present location
E\$\$2fif5 (genshikaku hann6) nuclear reaction
E\$E (genshi gum0b atomic bomb cloud
E??????E? (genshiryoku anzen iinkah Nuclear Safety
Commission
IE%7J%E% (genshiryoku iinkai) Atomic Energy Commis-
sion of Japan
I,%jjl\$)lz45- (genshiryoku enerugi) atomic energy
E\$jjie\$1JiE\$ (genshiryoku kisei iinkai) the Nuclear
Regulatory Commission
I???Wgzkif (genshiryoku kihon ho) Atomic Energy Law
Escmtgggg Lgenshiryoku kokfl bokan) nuclear powered
aircraft carrier
lE-?7JEIEEJJ (genshiryoku sangensoku? three principles on
atomic energy / N:Pi- H ?i . QEM (minshu. jishu. k6kai1
democracy, individualism. opening to the public
7 10;; 7

EE\$7JEEE E #4)Lig7khii (genshiryoku dandd misairu sen-
suikan) nuclear powered ballistic missile submarine
IE%77%E tgenhiryoku hatsuden) nuclear power generator
L??? (genshi r0) nuclear pile/reactor: N\$\$i (jiko) nuclear
reactor accident/ xrgigm'fgg tkakuno ydkih container for
radioactive substances
aiaang (genju naru keikaiJ strict precaution: N???
(o yosu) strict precautions should be taken
1&3 (kensho) verification
E7kii\$fit1i\$ik% (gensuibaku kinshi sekai taikaih World
Conference for the Prohibition of Atomic and Hydrogen Bombs
E7ki\$\$teELzEE\$ (gkg) tgenuibaku kinshi kokumin
kaigi / gensuikin) Japan Congress for the Prohibition of
Atomic and Hydrogen Bombs
g7ki\$\$ih8\$f\$ifk (Ii7kt3) (gensuibaku kinshi nihon
kyogikai/ gensuikyf)! Japan Congress for the Prohibition of
Atomic and Hydrogen Bombs
S&EM (gensokuzai) moderator
BEE?&% tgentei senS0l limited war
Eii (genbakux atomic bomb/ A-bomb: foE? kken shin)
medical examination of atomic bomb disease/ xfl1qtf (koro)
lonely aged survivor/ egg; lxshishux A-bomb poetry/ x :3
niho two hibakusha laws/ efzklthg-K (hantai shomei)
anti A-bomb petition/ viii Phi) x0 toka sum) to drop
the A-bomb/ eff M'VHET'JQ htoka no mokuhyb) target of
atomic-bombing
E&Eii? genbaku shibotsusha people killed by the A-
bomb/ A-bomb victims: e ?GZJi xmeib0J register of the names
of A-bomb victims who have died
IEQJE tgenbaku shox A-bomb disease: xFEeg kkanjahv peo-
ple suffering from radiation sickness
Ef3f%%gia% xgenbaku shogai chosa iinkaih Atomic
Bomb Casualty Commission (ABCC)
L?I\$(CJ: 5\$E02\$m&irf%a% ngenbaku ni yoru senryd n0
hyoka kento iinkaii Aebomb Radiation Dose Appraisal and
Review Committee
Ei%?&%%WEFE xgenbaku hisaisha shuyosho) A-bomb Vic-
timsh Center
E% xgenpatsur a nuclear power plant
V 10-1 7

IE%W%'EJ (genpatsunai rod0) labor in nuclear power plants
\$413K (kenpei tai) military police: x/L'EJS (honbu) Militaly
Police Headquarters
\$\$\$\$UE (kenp6 kaisei) constitutional amendment
Eifn'ikfffsll (genron tdsei) edict szikt1 controlling freedom of
speech
\$55 (kewetsu) censorship
C-ko
I&ETSE (kouryo) rainfall
EIikAi-b-W-iQS (k0 enerugi reza heiki) High
Energy Laser Weapon (HELW)
'TEKSFKI (kokyu heiwa) lasting peace
M%Efiil% (kokil jieitai) Air Self Defense Force
REE? (koku nikki3 flight diary
aiggmX (k6ku butai/ fleet
MEESE (kbku boka) Aircraft Carrier
IKE (kokeki: attack
1&3? (kdshogail after effects/ appearing effects of radiation
EMME (kojosem thyroid gland
?&it(17k(5:715 nkoseini nagaku tsutaerw to preserve for
many generations
gli'FiEiEi'liE/f U : MI! HbZr/ (koseinb tsujo bakuyaku/
torinitorotoruen) trinitrotoluene (TNT)
EE'W/Q a / (koso manshon) high rise apartment
mmggg (kozoku kyori) cruising range
36% (kodo) luminosity uminosity
Eggmggim tkoto shihan gakko) Higher School of Educa-
tion (the pre-war system)
EE (k0d0) altitude: ?27())7 1 ,, ix at an altitude of 32.700
feet
Dmi (koniaen stomatitis
7%281 (kbnetsu) high fever
56\$ (kbhal light wave
QE (k0huJ proclamation: ?%3 t_suru) to proclaim
FEW (kofukui surrender
?&?Biitt (koho jinchiw rear guard position
7 103 ,

HIP? (komon) anal passage
431% (koran) (F%Vi-%f; 5a)) handrail
Eifrus%m (kowa joyakw treaty of peace: QEN (zenmen)
all-parties peace treaty/ \$3va (tandoku) separate peace
treaty
111EQ\$EW1\$21E2\$ (kogata senjutsu kaku heiki) nuclear cluster
bomb
33141512; (kokyuki) respiratory system
WWEQE (kokyti konnan) difficulty in breathing
\$93 (kokuen) graphite
EH%IE%7)II&BE nkokusai genshiryoku kikan) International
Atomic Energy Agency (IAEA)
131%A1'gigif51 (kokusai jinken kiyaku) International
Agreements on Human Rights
Egggga (kokusai tsfnka kikin) International Monetary
FundKIMFr
EFgEGith\$ tkokusaiteki buryoku funsd) international
arms dispute
131%1iuiift31mi kkokusai heiwa bunka toshi) international
peace culture city
EAEEE xkokujin kyoju kux SOWETO: south west town-
ship
E1315 1k0kub01 national security
EEifiE\$i4 akokumin gakko k6t6ka1 post-elementary
school/taccording t0 the pre-war school system.1 public pre-
war post-elementary school
E&iilli 1kokumin giyutai1 volunteer army corps
EIEJSQEIE tkokumin so seisanl Gross National Pro-
ducthNPx
Eimgj\$E\$\$\$SQEE%FE kokuritsu hoshasen igaku 56g6
kenkyush0x National Institute of Radiological Sciences
QEE\$E\$E% (:2 1 2x-7tiaa? xkokuren gunshuku
iinkai (junebu iinkai)1 United Nations Committee on
Disarmament
EEEM4\$SU\$\$\$ 1k0kuren gunshuku tokubetsu s6kai1 U.
N. Special Session on Disarmament (1978 SSD I) (1982 SSDH)
(1988 SSDHJ)/ Special Session of the United Nations General
Assembly Devoted to Disarmament
1111i 7

IggigJBE (kokuren jimu s6ch6) General Secretary of the
United Nations
EQEWEE (k0kk6 danzetsu) rupture of diplomatic relations
%% (kotsuzui) bone marrow
'E'E (kotsutsubo) jar containing a person,s ashes
EIE%EETJE? (kotei hassha dai) fixed launcher
4E3'13%\$%423\$EE (kobetsu yiido takaku dant6) Multiple In-
dependently Targetable Re-entry Vehicle (MIRV)
IFS: (koya) ":5 v 744%. (barakku koya) small house,
hut (temporary)
iEEL (konranl turmoil
3'sa
nggi (saikinsen) biowarfare
?:??EW44 (saikutsunenryd) fossil fuel
EMIE (saishori) reprocessing
EEEZCE'IEEIIH (saisei furybsei hinketsu) aplastic anemia
fix (saidail maximum: xEEUQ; (ondo) maximum temperature/
V&EUTE (bakufliatsul maximum blast pressure/ xiiiaiff,
(chokkei) maximum diameter/ xELE (fisokuW maximum
wind velocity
EM\$4\$EEET\$VE (zaio beigun saiko shireikani Com-
mander-in-Chief, European Command
EBjc\$EEIIIEQE (zainichi daikanminkoku kyoryflmin-
dan) South korean Residents of Japan
E%AE& (sai totsunyutai) Re-entry Vehicle 4RV4
Eif%3it5 (saibUSD saserw rearm
4TH (sakusem operation
VEZQ (sakuretsur explosion: xiv?) (suru! explode
33H?) Ksasagerw to dedicate
\$Em (sakkinzai) germicide
\$fgtt\$ (sasshb hiritsu) kill ratio
?&Aj'tfvikig (satsujin kosen heiki) death ray weapon
#7412177 tsaburokkw Submarine Rocket 4SUBROC4
532\$; tzangab ruins
3mm (sankakukinW all-purpose trianglar bandage
, 107 4

1541: (sanjoJ disaster/ tragedy/ x0) (no) disastrous/ tragic M
'timx (hibakuno) A-bomb tragedy/ disaster caused by the
A-bomb
EQ'IiETi (sanseiu) acid rain
#o/STJL (vagnpsagtaaiaaswm (soren chukyori dando
misairu) Intermediate-Range Ballistic Missile of the U. S. S.
R
QEHhUE? (zanryu hoshanon residual radiation/ radioactivity
L'shi
GHQEEEW' JL-T IG. H. Q. gunoidan grdpu) G.H.Q.
Army Surgeons Team
E92 (shigai) corpse Iknzrpslz x52?f;7g;x (ruiruitaru)
heaps of corpse
E&W tjieitail Japan Self-Defense Force
355%? (shigaisenk ultraviolet Ixitravziialitl ray
37%053' (shi tokyokw municipal authorities
Eijiaifgiwg\$\$ xjido tsuibi geigeki shudan) homing in-
terceptor technology
5M: tshinu) to die: ;.tf;..tf; ': o kbatabata tow to die one
after another
EEGFX kshi no hail atomic dust/ radioaktive waste/ lethal ash
ZdeDQii :shi no machiN city of death
\$0E\$6E xshi no renrakuinb municipal omjumisips 11 liaison
Him 221111 officer
?E kshikyu) uterus Liuztamsj
EEEEU) njikyujisoku no self-sufficient: oi'ih'il xsaien)
self-sufficient vegetable garden
\$EM\$ kshihan byoX purpura
5E1:\$ tshiboritsu'x death rate
manna :shimai toshio sister cities: Wf'km (engumi) sister
city agreement
L&Ci; kshimikomub penetrate
FEETvEBydE (shimin byoini municipal hospital
#5&#% Lshimin onatsw fingerprint: oHirIr' kkyohil refus-
ing to take a fingerprint
51\$ia3 :shagekijow firing range
108

EEEQEE (shashin teisatsuki) photo-reconnaissance irik;
3nisans1 plane
iEin (shaheibutsu) shield
E1%%' (jish6sha) the seriously wounded
3% (shuken) sovereignty
16%: (shisen) end of war
EEEQRE (shfldan anzen hosho) collective security
E3\$SEE #4)L (jddando misairu) heavy ballistic missile
L: K0 5Tc/viii (jutan bakugeki) blanket bombing
iWiiFEiE-EEK (junan hann6 senryaku) flexible response
Ei&\$#k B29 (jflbakugekiki) Superfortress bjusparf32rtris1
(EE Q37? (jimin tdhy6) poll of residents
1R??? (shuyo) housing: xii) (suru) to house/ xi)? (sho)
temporary shelter
\$\$JI1P (shukkin chd) on duty
Hjml'liilil (shukketsusei soin) hemorrhagic diathesis
wjj (shutsudb) dispatch: x179 (suru) to dispatch
ka (shumokul wooden bell hammer
\$71\$E (shuryokukan) capital ship
ZEEIEE (jun gunkoku shugii paramilitarism
MH 5 #4)L (junko misairu) cruise missile:
???JEREEEN (shingata chokyororia Advanced Long-Cruise
Missile ACM
Ha (junkyo) martyrdom (self-sacrifice)
EH\$ kjunshoku) dying on duty: xii) ksuru) to die at
one s post of duty
\$EEEE\$9\$3EE #4 JL (jun chukyori dando misairu)
Medium Range Ballistic Missile MRBM
%%E\$ (shoidan? incendiary hnseindierm bomb
FEE xsh6gai7 disorder: HififijiiiKt-fiiilax (hbshanb ni
yotte okoru) physical disorders caused by radiation
FEEL? (shogaiji) deformed Child
iiiiftig tshokaki) digestive organs
INEEBX (Shokantai) flotilla Hloutim
E53 kshokudo: esophagus hzsafagn\$
\$Eiif3iii313\$i (Shokyoku boei: passive defense
EEK (shogekiha) shock wave
E5I%EF)\$ (shoko kaigishOJ Chamber of Commerce and In
dustry
, 10\$)

2E? (shogen) testimony: N17,) (suru) testify
amagmg (shosai teisatsu eisei) a close-look satellite
which can take close-up photographs
#Rj (jbzai) collection: Ntdiwbb (o atsumeru) to take up
a collection
13%; (shoshitsu) destruction by fire: Nhhti)? (chiiki) area
ruined by fire/ xwehz.) (o manugareru) to escape the
fire
?EJKD Lj0ijjinko) original population
IJxEEJE (shdtosho) microcephaly/microcephalia
EIEEEK (joryilsui) distilled water
42ch shbryo n0) pin-point
???;QEW (jbsenshokutai) autosome
3-K???) tshbten surui to ascend to heaven
Ei Lshode ruins
EEA xshonin) witness: ?zgx tiki) eyewitness
4me Lsho hahenl fragments: 4157x0x 1grasu n01 glass
fragments
iEiBjiEE% kshobo doro fire prevention roads
QIQBE\$\$ Lshomeidane illuminating projectile
?%Eiim, tshoro nagashiw Lantern Boat Festival
B\$\$i? kjomaku shiki unveiling ceremony
?EEEEEEE tshokuminchi shugix colonialism
E5)? shokuyokux appetite iaizpitaitl: #) 13%Lx xga nai) to
have a poor appetite
\$0513: xshirasek news item: 55%fpkm :shusen n01 news of
the war's end
579% xshireibu: headquarters IheEdkwoxtarzl: t3? T&Ex
Ldaini sogun) Second General Military Headquarters
\$5EJL\$HQEEP\$E5\$EW\$4)L (shingata senryaku kdchi
hassha misairui Advanced Strategic Air-Launched Missile
ASALM
%E%EEE%EE%EE#4)L xshingata tankyori kitaiki
misairul Advanced Short Range Air-to-Air Missile
ASRAAM
%H?Q3\$LEE%A9X?A xshingata dando saitotsunyfl
sisutemu: Advanced Ballistic Re-entry System ABRS
?HCPEEE'EEESHEE #4)L (shingata chukyori kiitaikfl
misairui Advanced Medium-Range Air-to-Air Missile
AMRAAM
7 110

#J/TZIQXBngaigi1f4)L (shingata tairikukan kaku misairu)
Missile Experimental KMX?
InxngE (shinkink6soku) myocardial infarction
A\$913E (jinken gaik6) human rights diplomacy
A&EE (jinken shingai) the violation of human rights
A3351; (jink6eisei) artificial satellite
%?EH\$%?&E5%EF\$ (shinkokusai keizai chitsujo) new interna-
tional economic order
A'E' (jinkotsu) human bones: NbiL-ij; (ga deta) human
bones were found
A9? (jinsai) a man-made disaster
\$EQ (shinsan) deprivation: xfgfmbi) (o nameru) to suffer
deprivation
AEEESIJ (jinshu sabetsu) racial discrimination
A\$EBE%E??% (EAICYdi-EH (kokujin ni taisuru jinshu
kakuri seisaku) apartheid: Iz/xfEFESiEEiE (han jinshu
kakuriho) anti-apartheid legislation
AE\$SUWQ\$EKJ (jinshu sabetsu teppai joyaku1 Interna-
tional Convention on the Elimination of a11 Forms of Racial
Discrimination
AEEiE/JiyyBjj (jindb shugiteki enjo) humanitarian help
EBEEIEE (Shinjuwan k6geki1 surprise attack on Pearl Harbor
Elm (jinzB) kidney1kidni1
SEEK? (sinchugum occupation forces
AE'MEEE (jinteki higai1 human casualties/ human damage
E31 (shindbi concussion 1knnk,x1.m1
\$ng xshinzo ishoku1 heart transplant
(??EE5WEE (shinrai josei sochi) Confidence Building
Measures CBM
Eigg (shinraidm reliability
1% (shinryakw invasion/aggression: e11? tsha) invader/
aggressor
2%.iiiiBTirR (shin reisen jidaiw1 new cold war era
T-su
IKZE (suijunr (radiationlevel
, - 111 i

7kihE1iiiE4f/HL (suijbkan sekisai misairu) Fleet Launching Ballistic Missile FLBMT
7k? (suisol hydrogen: xfi% (bakudan) hydrogen bomb
7KEFEEEE'EEHL4 JV/X-TA (suichfl ch6kyori misairu
sisutemw Underwater Long-Range Missile System /ULMS)
EE%E%1& (suichoku richakuriku ki) Vertical Take-off
and Landing /VTOL2 Hi:t3:l1
?EE%51 isuiteisfu estimated figures
7kf%i (suitb) canteen (kaentizn1
7kjj%'% (suiryoku hatsudenx generating electricity by water
power
7k77\$2\$FE (suiryoku hatsudensho) hydroelectric plant
QE%' mugaikotsuX skull
X M21 /7-r7Lx90 (sutoronchiumu 90W strontium 90
1N4 ?%E (supai eiseii spy satellites
X'J#74)L.%\$E5Z rsurimairuto jikoE Three Mile Island
nuclear power plant accident
EUiAa'EL (Suwarikomix sit-in
ti-se
iSEID-"EE xseikatsu no anteiW stabilization of one's livelihood
IBEE Lseikigun regular army
\$MU\$\$ (seigyobo control rod
gifzifilii tseikei shujutsul plastic surgery
\$hEH\$ xseishokusenl genital gland
ESZIEIEI tseisokenx stratoshpere Btreitasfiad k
\$E% xseizonsha' survivor ;
EE\$W5%\$E xseitainai noshuku'x biological concentration 5
WE (E??(D) thoritsu n0 seitei establishment: x'fbl
xsurw to establish %
E350)??? seiten n0 hekireki) thunderbolt from the cleari
sky
EgiiiEE?/KBX seimitsu yudo saitotsunyutaii Precision-
Guided Re-cntry Vehicle PGRV
\$IJHE Iseifukus uniform
E\$f2\$\$\$\$g xsekai hoken kikol World Health Organization
tWH0i
113

.&??E\$B (sekai renpb) World Federation: x7 979% (ajia
kaigi) World Federation Asian Conference/ NEW? (toshi)
World Federation City
,1i5?%?&0)8 (sekai saigo no hi) doomsday
\$\$\$\$DE%B\$FHE%% (sekai heiwa rentaitoshi Shich6
a kaigi) World Conference of Mayors for Peace through Inter-
City Solidarity
35\$? (sekikan) stone coffin
31H'iEH3%%E% (sekijflji kokusai iinkai) International Red
Cross Committee
ESL? (sekiran un) cumulonimbus U(juzmulounimbst
EEEE (sekisaijilryo) payload
?%EE (sekizui) spinal cord/ spine Bpaim
\$1315? (sekkekkyu) erythrocyte (eri/Irousaity red blood corpus-
cle Rizpos 311/ red blood cell
jEQWEQi (sekkyoku b6ei) active defense
t:/ '7Lx137 (seshiumu 137) cesium 137
E55 (sesujil spine: #2 067) ': L 7'; (ga zotto shita) a shud-
der ran down my spine
\$Q3QHEEE (zettai heiki) absolute weapon
\$132 (senHkiJ theater: xfwiiiz U (kakusenryoku) Theater
Nuclear Forces TNF)/ 9952%% (kakuheiki) Theater
1 Nuclear Weapons 'TNW
%%E9i- (semi soshitsu) unwillingness to fight the war
\$13 (zenkai) complete destruction: ?% 43 (suru) to be com-
pletely destroyed
?fiR (senkyo) military situation
55% (senkb) flash
?.cWUHHZa (zenkoku ni yobikakeruW to conduct a na-
tion wide campaign
tybL- (??%WPE) (sensa/tanchiki) sensor
?&i (sensa) tank
\$t1\$1 (senjutsul tactics: xffzfiiiiz U (kakusenryoku) Tactical
Nuclear Forces TNF / \$915(%% tkakuheikil Tactical
. Nuclear Weapons TNW/ 1'23- (heikil tactical weapons
\$157 (senjbi battlefield: NMQLEXE Lkakuheiki) Battlefield
Nuclear Weapons BNW
\$1\$5 (zensho suru) to be burned to the ground
WSE&itt (zenshin kichi) advanced base
-113#

QEKR (zenshin fukai) general malaise ma3k3iz1
ig7kf1EiEiiM%E#4)L (sensuikan hassha junk?) misairu)
Submarine Launched Cruise Missile ASLCM)
?;7M%EETE\$SEE 47%)L (sensuikan hassha dand6 misairu)
Submarine Launched Ballistic Missile (,SLBM)
atmutzszgggg (sensei kakuk6geki heiki) atomic counter at-
tack weapon
f\$lj15z\$ xsensei kbgekij preemptive strike
55\$IJEg-2 (sensei dai ichigeki) first attack
E&Etg sensen fukoku) declaration of war
\$\$M\$ sensf) h6ki) renunciation of war
\$E\$EEHM\$5E (zentsi kanpangata junybkkan) through-
deck cruiser
EEK? Lsenden bira' propaganda leaflets
:FHEJg senbazurul thousand paper cranes
?Sffgj (senpukukix incubation period
2332 kzenmetsul annihilation: x471) ksurui to be an-
nihilated
%E%Lt zenmen kinshi total ban
\$E\$i\$ xzenmen sensox general war/ all-out war
EHfLifsi zenritsusen) prostate gland
\$ifE% nsenryaku) strategy: FEW U kkakusenryoku)
Strategic Nuclear Forces SNFx/ xfiiiigg kkakuheiki)
Strategic Nuclear Weapons SNWt/ V&Etk (bakugekiki)
Strategic bomber
\$i5\$iig\$lJBEZE\$\$ xsenryaku heiki seigen koshd) Strategic
Arms Limitation Talks SALT
&E%BX?\$\$?E xsenryaku boei kOSO) Strategic Defence In-
itiative SDI
5% ksenryo occupation F Lka) under military occupation
\$\$E\$. -f5a%gl3 tsenryogun so shireibw General Head-
quarters of the Occupational Forces G.H.Q.
wgmmgi (senryaku no kinkoi military power parity
%'so
igfi'ingx-Qc- nsoki keikai redaJ early-warning radar
\$\$5%\$E:/X?A rsoki keiho sisutemw early-warning system K
,114,

\$\$a%% (s6gun shireibu) General Military Occupation Com-
mand of the Military
iEmQEE' (z6ketsu kikan) blood-forming organs/ hematopoietic
organs
\$EEQW\$6D\$W% (s6g6 izon n0 senryaku) strategy of in-
terdependence
\$EEBE\$GIEMEZ1\$ (sbgd kakujitsu (sh6) hakai) Mutual
Assured Destruction (MADX
\$EEYQ\$ER\$HIJ\$Q (s6g6 kink6 heiryoku sakugen) Mutual
and Balanced Force Reduction MBFR)
tawm (S6sai senryaku) countervailing strategy
\$EST6 (sbt6f) suru) to be the equivalent of: 20399 It VOLN
(ZUkiro ton ni) to be the equivalent of 20 kilotons
1933526 (zbfuku surut to amplify
hEiEbE (zbshoku r0) breeder reactor
H55 (sokai) evacuation: xi?) (suru) to evacuate/ x/xlEzi
(jin,in) evacuation of people/ people evacuated/ iiix
(gakudbl evacuation of pupils/ xi? (sha) evacuee
EIET: (sokushi) instantaneous death: xii?) (suru) to die in-
stantly
53E (sokudo) velocity
5R'JE3'5 (sokutei suru) monitor: 5&%ft&wgae;25lEN6
(hdshan6 n0 tsuyosa 0 shiraberu) monitor radiation
levels
t/f-WKCPHEE Lsona suichu choonki) sound navigation
and ranging 'SONAR
7 HI HE\$7J\$D\$JFFJ\$E% (sobieto genshiryoku heiwa
riyf) iinkai) the Soviet Committee for the Peaceful Use of
Atomic Energy
t/El%\$\$\$E;E/g (soren kokka uchu tansa iinkai;
State Commission for Space Exploraiton SCSEt
7: "(3
%_E (dai ichigeki) first strike
%-BiEJ%IK% (dai ichi rikugun byoin) First Army Hospital

74 - 4) (dai in) a die in (simulating death)
(This is done on anniversaries commemorating those who died
in this way of the atomic bombing of Hiroshima and Nagasaki)
YM\$7543\$\$EBJJ (taigai yishf) gunji enjo) foreign military
arms sales
XiEtZi\$ (taiki ken kaku jikken) atmospheric nuclear
test
iiEBHEi (taikii bbei) anti-aircraft defense
if? E #4)L ttaiki misairu) anti-aircraft missile
13%? (daikeil trapezoid: x0) (no) trapezoidal
(253%EE (taiken kii record of personal experience
ggmaaan (dai go Fukuryfl Maru) Fukuryi Maru No.5
JaE-E (daiza) pedestal
\$l#% (taisakul counter measure
xrgg; xdai gyakusatsux holocaust
??%E E #4)L (tai sensha misairu) anti-tank missile
Wignh'ii (taisen shokai3 anti-submarine patrol: 4&2 (ki)
anti-submarine patrol aircraft
i45\$SEE#4)L atai dando misairw AntiBallistic Missile
ABMx
7(EE\$&\$ rdai toa sensox Greater East Asia War
Hawaii; ttainai hibakw prenatal radiation victim (in-utero
radiation survivor)
KEE3279 ktaiha suru1 to be severely damaged: kmgfse
4taiha zensho; to be demolished and burned out
X\$i\$\$\$ (taiheiyoku sensox Pacific War
X262? kdai honeh Imperial Headquarters: x%f&' (happy6)
Imperial Headquarters announcement / xsiagm (chbsadan)
Imperial Headquarters Survey Team
iii #4)LBEQiJ/X'TA ntai misairu boei shisutemu)
anti-missile defense system
4B\$\$\$ji% xdairi senso1 war by proxy
(\$73 itairyokw physical strength: x/fxfgkx Lga nai) lacking
physical strength
X\$%F879\$SE%\$ ktairikukan dando dan' intercontinental ballistic
missile (ICBM)
Exh-
gnU ((tairyo satsurikw genocide
14:3124MF- xdaitai enerugi; alternative energy
#1167

Wibitv (taegatai) unacceptable xfel'i? (songai) unacceptable damage
%&3\$EEE%A E #4)L (takaku danto saitotsunyi misairu)
Multiple Re-entry Vehicle
VIE (takeyari) bamboo spear
unawsznza (tataki tsubusareru) to be leveled to the ground
HEEHj (dasshutsu) exodus kksadasl: 'EMPv/Dx (kogai eno)
exodus to the suburbs
Hibk (dassui) dehydration
fc9\$5 (tatsumaki) tornado hozrneidoul
HH% (datsumo) epilation/alopecia/falling-out of hair
EMEIbri (tatemo no sokai) demolition of buildings and houses / dismantling buildings: xVF% (sagyb) work of removing buildings/ building demolition work
?EUEISJ' (dabi ni fusu) t0 cremate
Eth46 (taresagaru) to hang down: iriHiEHtfiiLKKJS/J?
Hibxgx (mina yake tadareta hifu ga karada kara)
Everyone had burnt skin hanging down from their bodies.
#Eag (tanka) stretcher
lift (tanka) charring
EQEEBWZX (dankaiteki kakudai) escalation
EQBEBGEIJH (dankaiteki sakugen) phase down
EEE\$5\$JEE#4JL (tankybri dandb misairu) Short Range
Ballistic Missile (SRBM)
5E5 (tansekil gallstone
9\$SEE\$ E #4 JL\$IJISE9E\$47 (dandodan geigeki misairu seigen
jbyakuW Anti-Ballistic Missile Treaty
E\$SEE#4)LWH% (dandd misairu bOCiJ Ballistic Missile
Defense
?EEE #4 JLE\$E (dando misairu geigekimo) Ballistic
Missile Defense (BMD)
5-Chi
? 1)L / 744 U tcherunobuiri) Chernobyl/Tschernobyl: # lijiifi
\$atik (genpatsu jiko) Chernobyle nuclear accident
E55 (Chikaw to pledge
w117 7

tttTtZt%\$g&\$IJBE?&W (chika kaku bakuhatsu jikken
seigen joyaku2 Underground Test Ban Treaty
ttngtggg\$um% (?inaamb) (chika kaku bakuhatsu
seigen joyaku / heiwa mokuteki no) Treaty for Peaceful
Nuclear Testing
ittT\$2\$\$\$ (chika kakujikkenJ underground nuclear test
titEMHD Ichikyugai no) extra-terrestrial
imiifiama (chikyu saigo no hi) doomsday
itt%2&\$%3%i%% rchikei shbgd yddo s6chi) terrain contour
matching
E&Ekgi (chishi senryb) lethal dose: ix (han) semi-lethal
dose
itti%#iwfi3#4)L (chijo hassha junko misairux Ground
Launched Cruise Missile (GLCMI
imEOD xjishin not seismic/ of earthquakes
ittYiEEhL/f)L Vchi-tai-ku misairm Surface-to-Air Missile
(SAM)
Imf:6\$(:7;ofc xchidaruma ni nattal bloodstained/ be
covered with blood all over
3% :chisso nitrogen Maitridmmj
i1t75\$513EH3 :chiho sokaifu District Governor General
316%, : xchimei d0) lethal level/ fatal extent
?Eki'5 tchakka surw to be ignited
\$\$\$2Q13 tchuo kisho dai) the Central Meteorological Agency
EPSQTEWE; Lchuo johu kyokur Central Intelligence Agency
(CIA)
\$EE\$MZ\$UU Ichukyori kaku senryoku1 Intermediate-Range
Nuclear Force (INF)
EPRE\$\$\$SEEBL4)L (chukyori dando misairu) Intermediate
Range Ballistic Missile (IRBM)
\$E\$EI\$% tchugoku uchu kogyoshm Ministry of Astronautics
(MOA)
\$E\$Ea%g tchugoku gun kanku shireibu) Chugoku
Regional Military Headquarters
EFE%EXEJ%E Kchugoku kenpeitai shireibu) Western
Japan Military Police Headquarters
CPE%%3JME xchugoku zanryu koji) War Orphans left
behind in China
EPW??- ichuseishi neutron: wtgw abakudam neutron bomb
,118,

\$151235ng (chisibu k0geki) decapitation strike
143% (chfldoku) intoxication
Em???) (chuton suru) to be stationed/ quartered
CPE?K3HZW1E52?E%/F5?D)L3%\$ (chinanbei hi kaku
chiiki j6yaku/ torateroruko j6yaku) Treaty for the Pro-
hibition of Nuclear Weapons in Latin America (Treaty of
Tlatelolco)
EPE'ZB/Jli% (ESZEIBi0D) Ichuritsuteki tachiba/(seijijo no)1
middle ground
56%;???) C &(Dt;v (chiyu suru kotono nai) incurable
53%% (chiyu taisaku) medical treatment for the injured
59251 (ch6ka) dirgddnzdH
\$33 (ch6ki) flag draped in black/ a flag at half-staff
EEjngE (ch6 ky6ryoku bakudan) super powerful bombs
ERIE (ch6saJ survey: dam (shiryoJ survery materials
WE (chozb) reservoir (:storage)
E?(El (Chdtaikoku) super power/ superstate
WW? (ch6nai kai) neighborhood association
?%Ui% kchoheirei) draft call
E&FEI (choy6ko) drafted workers
TEE (chokugeki) direct hit of the A-bomb
Tag (chokkei) diameter
O'tu
Egg (tsusan shoi the Ministry of International Trade and
Industry (MITI)
iE'Ti'gijj (tsujb senryoku) conventional forces
iE%ii% (tsujo heiki) conventional weapon
CECE (tsumuji kaze) whirlwind
)%f:b\$\$\$ (tsumetai sensm cold war
iETji (tsuya) vigiI/wake: x 'Z'fb (0 suru) to keep a vigil/ to
hold a wake
3&biHi%l'lE0\$)Zs(Cisb Ltsuyoi shigekisei no aru nioi) a
sharp irritating odor
71197

f-te
iEEMQV/ZfA (teiku boei sisutemu) Low Altitude
Defense System (LOADS)
F%Efi (teikoku shugiJ imperialism
fggig) (teisatsu suru) to scout
53(2)?) t_teishin kyokux Post and Telecommunication Bureau
SEE (deijinz mud and dust
\$i'??? (teitaii halt: NTZ; tsuru) to come to a halt
\$bu5ick (tetsu kabuto) battle helmet
\$%93:1 //7 'J_ rogm Ltekkink konkurito no tatemono)
reinforced concrete building
#0513 tte no ko': back of hand
\$0015 ate no hiral palm of hand
?JLJLI32 (teruru 132) tellurium 132
\$i\$ xtenH' metastasis/spreading/transferral
,EJIZP (tenkov r011 Iroull call
?%Hgi (denshi sensox electronic warfare
X????J? xtennen shigenw natural resources
\$3?wa xdenji parusu Electro-Magnetic Pulse
E. kdensenx electric wire
fi%fi (densen byox infectious disease
fi\$ Ldentanl - 'r'fifztt ' ksenden bira a leaflet
&-to
F4VM\$RHE5EHgEF5 Ldoitsu koku uchu kenkyusho)
Deutsche Forschungs und Versuchsanstalt fur Luft und Raum-
fahrt (DFVLR) Air Space Resarch of Germany
IEHij-ci tdoi gensox isotope
?hE d0in mobilization: Viv; xsuru3 to mobilize/ ifiw
xgakuto mobilized students
Q56 Joeir imprint: vfib tsurux to imprint/ ???Dx (kage
n01 imprint of shadows
EEX#&L\$J Kt00 kyosankeni East Block
Sigh xtokaryokux penetrating: 05:3& m0 tsuyoi) strong
in its penetrating power
VERE Ltonyo byox diabetes mellitsu/ glycosuria
121) #

\$\$\$\$le (tOkyo saiban) Tokyo War Crimes Trials
\$37333;ng H6g6 sanbo honbu) Joint Chiefs of Staff
??giii (t6sha juryd) throw-weight
EJIDFitl: (dbshin en jo ni) concentrically
373% (d6s6kai) alumni association
i3\$ (t6r6) paper lantern: xWL (nagashi) paper lanterns
floating in the river
53m? (tokasu) to melt down
\$71.1 (doku gasu) poison gas
?igiiiifilifi (dokusai seiji) dictatorship
##BLJ?\$E% (tokubetsu s6satai) task force
?BHTEfE (toshi keikaku) city plan: ij'fQEYJN (kindaiteki)
modern city plan
iEMEU (Dim (doshaburi no gou) torrential rain
hfh/f (tcnakail reindeer
?EU\$%S (tobi deruX to pop out: II/fm (me ga) one s eyes
pop out
&(2 &(\$%5((tobo tobo aruku) t0 trudge/ to plod
hVan-7 (tomahdkul Tomahawk
#34 -7- / FE%7ji%7MEE (toraidento genshiryoku sen-
suikan) Trident nuclear-powered submarine
#54 \$7 b E #4)L (toraidento misairu? Trident Missile
h ') F7A ktoriumu) thorium
fg-na
WEE? (naizd? internal organs
EWQEHX-yH-WEKEE tNagasaki ika daigaku fuzoku by6in)
Nagasaki Medical College Hospital(1923x 19491
511%132Etg (Nagasaki gata genbakw Nagasaki-type-
plutonium'bomb
EW\$II3%3UE%% LNagasaki kokusai bunka kaikan)
Nagasaki International Culture Hall
EUEZKffv? (Nagasaki honsenl Nagasaki Main Line
NASA (XIMEEFEEJ) (beikoku koku uchu kyoku) Na-
tional Aeronautics and Space Administration
7' h ') F7Lx (natoriumm sodium
\$3 (namari lead

ME inanko) ointment
%E (nanmin) refugee
\$E31Em rnanmin jyoyakuI Treaty Relating to State
Refugees
(z-ni
Pf1 (AC7)) mikuW flesh
PERE (nikushin1 one,s family. one's own flesh and blood
S&K'fiai (nigemadow to run about frantically
:szaqut (nijiteki kasai) secondary fire damage
(:lLrBHjZ) (nijimi derut to ooze: fgmfwblfnfflx Lkizuguchi
kara chi ga) The wound is oozing blood.
:EESZT Lnisoku sanmon den at bargain prices
BXEQRE%\$Q michibei anzen hosh6 jybyaku) US.
-Japan Treaty of Mutual Security
BX%EIE'X\$X\$EE3% tnichibei kyodo genbaku senryb
saihyoka'x U.S.wJ21p311 joint reassessment of A bomb radia-
tion dosimetry
EUKJE%7JT%E xnichibei genshiryoku kyoteiw U.S.vJapan
Nuclear Cooperation Agreement
BXE%7JEH%FH mihon genshiryoku kenkyilsho) Japan
Atomic Energy Research
EHKQIEEHEEI x_nichibei godo chosa dank JapaniUS. Joint
Commission
El\$\$wi%i%ngi\$%i%gggg%gllia% xnihon gakujutsu kaigi
hoshasen eikyo chosa tokubetsu iinkai) Japan Scientific
Council's Special Committee for the Research of Radiation Ef-
fects
NWEJGEJ myuin saseruj t0 hospitalize
i7? myoW urine
1103i tnyoko d0) Nyoko-der. Nagai's houselz dthHB'ilx
i'lfiibto (onore n0 gotoku rinjin o aise yo) Love thy
neighbor as you love thyself.
(waEF) miwaka amei rain shower

?YQ-nu
?EH6 (nukeru) to fall out
?a-ne
XXX h/ NEST (nesuto) Nuclear Emergency Search Team
131% (nessen) thermal rays/ heat rays/ thermic rays
,met (netsu senko) thermal flash
Q5)? (neppa) thermal wave
QEK (neppu) blast of heat
QEiSEEBL/fn/ (netsu yudo misairu) infra-red guidance
missile (heat seeking missile)
12H41f\$ (nenryo bbw fuel rod
UD-no
f%i\$3'75Q/ (noshuku uran) enriched uranium/ concentrated
uranium
Hiiii'xftari (n0 nankasho) encephalomalacia/ softening of the
brain
mgi (n0kotsu do) vault
H&3%% (no misc) brain tissue/ gray matter
(i'ha
H\$ (hai; lung
EQUINE (haiketsushol sepsis
E332?) (haikyw rationing: x13; (suruw to ration haieSnrq / to
distribute / Kmx (kome n01 rationing of rice
BE\$ (haikyo) ruins/ remains/ barren
EENCK6 (haiko ni narub School is abolished.
HE (baijin) soot isu(:)t/sut1
39% (haisen) losing the war: wa'm; fl)? (no setogiwa) on
the brink of losing the war
EVE (haibi) deployment

H117) (hakairyoku) destructive power
0.113% (hakike) nausea In5zsial
Hi! (bakuen) spiraling columns of smoke rising into the sky
Illbilt (bakushinchi) hypocenter Ihiip asentar1: we 1 #1 :1
DE\$ (kara ichi kiro no hanti) within 1 kilometer of the
hypocenter
ti/DE'F (bakushin chokka) right under the hypocenter/
point directly beneath the hypocenter
5% (bakudan) bomb: 6E5KUDN (jirai no) conventional
bomb
ENE (hakunaishB) cataracts
ii% (bakuatsu) explosion: NE? (on) sound of the explo-
sion/ er (dai) tremendous roaring blast/ Njii (h6shiki)
method of detonation/ xfangjEJEffFa? (go no keika jikan)
lapse of time after the explosion
13m (bakuflebomb) blast/ blast wind/ blast force: x HEW
(to bakuatsu) blast and pressure
5%): (bakuyaku k0) arsenal ElzrsinsH
E? (bakurai) depth charge
BEEF (hashidoko) floor of bridge
IV-9k'fll (pishingu II) Persing II dug - (TIEFigE'SEiijQ i tt
4/1,) (beikoku-chflkyori dando misairutt Intermediate
Range Ballistic Missile of U.S.A
NX-jlia (bazikahdt bazooka
?% (hadaka) nakedness: em/btrtl mo shonent naked boy /
6i7aki t wa'C'x'Et "CL xi) A 'z tboro o mattote e de
aruiteiru hitobito) people walking about in tatters
?.?:2 (hatsuiku fuzem hypoplasia theipopleifuiat
%,3! (hatsunetsut fever
?%Vif'lii (hakkutsu sagyoi excavation
ElIfIHl (hakketsu bybt leukaemia
NV 77 7 4 V- (bakku faiah Backfire t/tiihlijr Eili\$lf'%'lliigi%itg2
(soren cho onsoku chixgata bakugekiki1 Supersonic
Speed Intermediate Bomber of the USSR
EIEIBR (hakkekkqu leukocyte tlllzktasilite1/ white corpuscle
EMWJEQ/Mfi (hakkekkyu genshoshu) leukopenia
Huzkopiznm
E143 (hakkotsu) bleached bones

%%\$h% (hatsurei sareru) to be sounded/ to be issued: g
?HEN (keih6 ga) The alarm is sounded.
7% (hato) dove IdAVl
51m (hanaji) nosebleed/ epistaxis tepistaEksis1
'A-7o9t/ (hipfm) AGM984 Harpoon/ A463 ' %5P%%fi(\$%5
#4 IL (beikoku kfxchfl hassha junk6 misairu) Air
Launched Cruise Missile of the U.S.A
1532K (hametsu) disaster: xB'JtcHiaEi (hametsutekina
' dekgoto) disastrous event
N5v 7 (barakku) shack/hovel thfxval / htxvl1: K&E%mx
(fuh6 kenchiku not) illegal shacks
'liU (hari) beams: NDF%%L:&6 (no shitajiki ni naru)
t to be crushed under beams
/f)LX%E% (parume iinkai) Independent Commission of
Disarmament and Security Issues under the Chairmanship Of
Olof Palme
Eh()hare swelling
;H77%'\$ (haryoku hatsudent wave-power electricity genera-
tion
ligii'r? (hankaku kanjb) anti-nuclear sentiments
7;?ng (hanky6) strong reaction: W:?MIUVQ/ 93/170) (sekaiteki
5 x0 ataeru) to cause a world-wide reaction
egg (hankei) radius heidioslz N2km03112fyiw Within 2
kilometers radius of the hypocenter
\$5532%5((hangenki) half-life
45%?543411i (hansu meichi hankei) Circular Error Probable
(CEP)
BEE (hantenl spot
\$??(71W) (hanratai no) half naked
f U'hi
11\$ (hi) monument
PLO (pieruo) Palestine Liberation Organization
\$5571??? (hikiageru) withdraw: EgX/Ji-Fmagifrp)x (guntai
ga zensenkarai The army withdraws from the front line.
9;; (higai) damage: Iii'hipibx (genbaku ni yoru)
damage due to the atomic bomb
-1259

aFQEEU (hikaku sangensoku) The Three Non-Nuclear
 Principles
 3H2ifii&%"\$41 (hikaku busd j6yaku) de-nuclearisation treaty
 3H2i\$ih\$ht% (hikaku bus6 chitai) nuclear-free zone
 Xt?9((hi ga tsuku) to ignite hgniid
 I573 Fk (pika don) tremendous flash and sound
 ,3ng (higan) earnest desire
 %I?%%- (hikiage sha) repatriate D'izpeitrieit/#paae-1
 glitz; (hikizuru) to drag: 5%th (shitai o) to drag a
 dead body / (4&3: :karada 01 to drag oneself along
 EZFZEEE (bikini kanshf); Bikini Atoll kiatgtm
 ?ggg (higeki) tragedy itrakdsidH
 \$135 (hik6jm airfield
 meg (hisaisha) sufferer/ victim/ 1,if'i'fiwx (genbaku no)
 A-bomb victim
 55% (hizb) spleen hsplimI
 HEjC Lhidai) abnormal enlargement of a body organ
 3EIEJEQEHM%E% ahidbmei shunokaigil Conference of Heads of
 State and Chief Ministers of Non-Aligned Lwlilind1 Nations
 53% xhinan) refuge: Viv; xsuruw to take shelter/ to refuge/
 VHIQ Lakichi: unoccupied lot/ e-E Lsaki) evacuation loca-
 tion
 JUDE xhi no tama) fire ball
 ?Mibibb Lhibaku gawara) exposed roof tiles
 1,3233% Lhibakushat radiation victim
 ?E'I\$% xhibakushax Aebomb survivor/ victim: \$4.??le Ltokubet-
 sux special A-bomb survivor/ victim/ ?HEZJ/ee tgaikokujin)
 foreign A-bomb survivor/ victim (It is estimated that there
 were tens of thousands of Koreans among the A-bomb victims
 in Hiroshima and Nagasaki. Students from Asia and the
 Pacific region along with American prisoners were also expos-
 ed to or killed by the bomb.) / klh'x (nyushi) entry sur-
 vivor/ victim 'inle ntainail in-utero survivor/ victim/ IEEEEV
 tchokusetsur direct exposure survivor/ victim/ Fa'jaiLN-
 (kansetSuJ indirect exposure survivor/ victim
 WT?%%I\$WJE khibakusha kenko techo)
 A-bomb Health Bookaictim's Health Record)
 ?E'I%\$\$EECD% xhibakusha techo tomo n0 kai)
 HibakushawictimsB Health Card Membership Association
 % 126 7

mii%&7KFaeEE%EE%% (hibakusha kihon mondai kon-
dankai) Deliberation on Basic Problems in Measures for A-
bomb Survivors (an informal gathering to discuss the basic pro-
blems of the A-bomb victims)
Wiiagf (hibakuji) moment of explosion
mgag (hibaku shiry6) materials related to the atomic bom-
bing
37W\$7TZJ (hibaku suru) to be exposed to the A-bomb: gjkx
- (niji) to be exposed to residual radiation
Wi\$\$5\$ (hibaku taiken) A-bomb experience: NE\$\$\$\$6
(o keish6 suruk) inherit the A-bomb experience
Wti:#i (hibaku nisei) second generation survivor/ victim
XE (hibashira) pillar of flame
t 82); (hifu) skin: x/J'K 6 0 k UHTL tf; the skin peeled Clear off
may: (hifuen) dermatitis tda:mnt:3itis1
3Eit\$tit\$ (hibus6 chitaih demilitarized tdi:militaraiizd1 zone
WY (hibun) inscription
i t)! A73?EI%45 (himemukashi yomogi) horseweed
392\$? (hiroku) a confidential document/ a (secret) memoir
tmgym; (Hiroshimagata genbaku) Hiroshima-type A-
' bomb (uranium b0mb)/ A-bomb dropped on Hiroshima. (The
Hiroshima bomb was three meters long by 0.7 meters in
diameter. It weighted four tons. Though nuclear fission, about
0.75 kilograms of uranium released energy equivalent to 12.5
kilotons of TNT.)
' E_A75&%% (bimu heiki) beam weapon
?EEEE (hyomen 0nd01 surface temperature
WEE (bybreki) medical history
(
5
,5x . fU
'7 7 7 t7) (fattoman) Fat Man/ Elmwlij'i 'rurigqmag B47,
(nagasaki gata genshi bakudan n0 angbmeil (Nagasaki
type A-bombys code name) cf. p.86
53fk3'6 (fuka suru) hatch: '3 ttfi';f%mfllfxfz) (uji ga
kizuno naka de x suru) Maggots are hatched in the
i wound.
tiiliiiAdbEZEg (fujikome seisakw containment policy
t ,127,

933.1175'x6 (fukiagaru) to shoot up: iir13cvbzbHTN (tenchi
megakete x) to shoot up into the air
WXEtKthZu (fuki tobasareru) to be blown away
?EEJE (fukuinhei) discharged soldier/ demobilized soldier
23%;? (fukugo osen) compound pollution
?ESVEFE (fukugb say6) composite effect
?E?lt (fukushi) welfare: mtgg-mx (hibakusha no) welfare
of hibakusha (A-bomb victims)
\$2571?! (fukusha netsu) radiant Ireidianq heat: xUMEEI (no
chokusha) direct rays of radiant heat
,5 (n5 (fukureru) to swell (swel): As0hf; kfukureta)
swollen bwbul an1 / 5 #1397513.) tfukureagaru) to swell up
?E% (fukk0J reconstruction: xiig (iinkai) reconstruction
committee/ NSHEI ikeikakul reconstruction plan
\$913:ng (busokaijo disarmament
(A13 rbutsudan) Buddhist altar
WEEK; (butteki higaii damage done to materials
?EEE (fumin) sleeplessness/ insomnia
F%U %%(xfuri sosogul to fall/ to come down
EBEWEKEJEg Iburaku kaiho domeii Buraku Liberation Union
K73?Ei% xburyoku shototsux armed clashes
5%)? xbunseki analysis
71L PZWA'Iiiig kpurutonium bakudanr plutonium blu:
tduni.)ml bomb
7 '7 / XEIE\$EER5EFR tfuransu kokuritsu uchu kenkyusho)
Centre National d'Etudes Spatiales (CNES) (The National Space
Research Center)
7KI/XD- F puresu kodo press code
#Qwanis xfunisai sarerux to be broken into pieces
Ache
EH%?Z) theisa suruW shut down/ close/ lock out
\$i% :heisha: barrack: minivan kkamaboko gata)
quonset hut
?KEEiMiim kbeigun kyokuto hosomo) Far East Network
(FEN)

?KIEiEE'gifng (beikoku kaigun j6h6bu) Office of Naval Intelligence
?KEHE;7J%E% (beikoku genshiryoku iinkai) Atomic Energy Commission of the US.
?KIEEHUig (beikoku kokub65h6) US. Department of Defense
%EIEIBE'I%\$EE (beikoku kokub6 j6h6kyoku) US. Defense Intelligence Agency
%E%%E\$ (beikoku senryaku kilgun) U.S. Strategic Air Command (SAC)
?KlileMiiiiHE- (beikoku senryaku bakugeki chdsad-an) United States Strategic Bombing Survey Committee
i\$l\$l13m\$iE\$77E (beikoku b6ei genshiryoku kyoku) US. Nuclear Defense Agency
%.M?\$i?1?AEHEEWdE%E% (beikoku b6ei shisutemu ch6tatsu hy6ka kaigi) US. Defense Systems Acquisition Review Council (DSARC)
?KEWiEiEiE (beikoku rikugun shikan gakk6) Military Academy of the US.
31% (heiwa) peace: x7 15- IL (apiru) appeal for peace-keeping/ xVwfif (iii) peace-keeping/ NJ??? (kyozon) peaceful coexistence/ xii (shugi) pacifism/ UKH (junrei) peace pilgrimage/ gcgim (kinen shikiten) Peace Memorial Ceremony/ xii (sengen) Peace Declaration
??DQEI (heiwa koen) Peace Park
& h-fA?&-Eflf&\$ (betonamu go shokogun) Post-Vietnam Syndrome
(i'ho
33%? (bdei) defense: xr?\$iffn?fi;5% (junbitaisei) defense condition/ NiaMaE ttaisaku) measures for defense/ in'JBU/tl (tekihannoi protective reaction/ x0318? (no tate) defensive shield
IWgEEiEfEQX-7Lx (boei eisei tsdshin shisutemu? Defense Satellite Communication System
(95%;? (boeichd) Defense Agency: xfi'r'f nchokan) Director General of the Defense Agency
7 199 7

BMRiSEny-TA (boei tsilshin shisutemu) Defense Com-
munication System
mmmgmag (boeiryoku seibi keikaku) defense build-up
program
Ea%k%%3"5 (hokai shoshitsu suru) to be leveled and burnt
to ashes
HEEESBZ (bogai denpa) interference of radio waves
MX7ME (boka suiso: fire cisterdsistarnj
5%Ei/ (hokatsu k0Sh0) global negotiation
E (boku) air defense: xf%(g01 airvraid shelter/ XEEFU
(zukin) air-raid hood/ xf/iifwl (taisei) air defense setup/ x
(321:1 (yoin) personnel necessary for air defense/ Night
(yochi; fire break
wanggw %hokoku teishintab patriotic ipgztrizitik/paetrftj-t-1
volunteer corps
(iii xhosox boronaJF/iafaggggn
magma rhoso eisei' broadcasting satellite
M54771? thosha genS0x radioactive element
ngTZa 4_hosha suru' to radiate
EYETIE Khoshasei radioactive: 70 'A ngasux radioactive
gasses/ J? M40 rkokabutsu radioactive fallout/ x IstfC/iiii;
ldoigensm radioisotope/ 0?:? rno kumoI radioactive
cloud/ diff \$3440 haikibutsu radioactive wastes/ #90 %\$
(busshitsu) radioactive substances/ :4 w r (yodw radioac-
tive iodine
551%.??? khoshasenx radioactive rays: '\$13\$ (shogaiW radiation
injury/ FUIUb xshokh initial radiation/ ???Ex (netsuw thermal
radiation/ x anfe tb0g0k protection against radiation/ QH'. L
5135'? :I. :0 dashitsuzukeruW to remain radioactive/ d3jEle'
W ino identeki eikyox genetic effects of radiation/ d7
; A no eiky0x radiation effect
5Y5i\$Z\$WQEIE\$3fSU%E% xhoshasen eikyo chosa tokubetsu
iinkaii Special Committee for the Research of Radiation Ef-
fects
Ir
\$25311? (hoshanox radioactivity: qua: (osen) radioactive con-
tamination/ x Lshogaix radiation disease/ wanna;
xsokuteiki geiger countcr/ v injvin' Lsokuteisho) radi-
ation monitoring station/ MWEE m0 chiri) radioactive fallout/
x i'AIIJHtF/L) (0 sokutei surux to determine the levels of
residual radioactivity
Ht)

M&QZS (hoshutsu suru) to emit: 171 /L#w%w (enerugi
0) to emit energy
E%&?%3 (hbtai o suru) t0 bandage
\$39??? (b6ch6 suru) to expand
Willglia (h6d6 kikan) journalism/ the press
\$332310 (hdfuku tero) terrorism for revenge
5f?%l3 (h6mubu) judicial affairs section
EEHKEE (bdryaku senden) strategic propaganda
5%WQ7JSIQE (bbryaku h6s6) black radio
3% (bokin) fund-raising
RT? (hazon) preservation: xii? (kdji) preservation work
13%;??5 (hossoku suru) to begin to function
7R -v F54 / (hotto rain) hot line
jt75\$Ei (hopp6 ryodo) Northern Territories
% (honoo) flame: xcL00ihZS (ni tsutsumareru) to be
enveloped in flames
36\$ (bohi) tombstone
3% (bohy6) grave marker: Lb\$mx (shiraki n0) plain
wooden grave-markers
5%)? (horyo) prisoners of war (P.O.W.)/ war captive
?HLV U / (horumarin) formalin H32rmalin1
(26):; (borokuzu) rag haeg1: km; W; A (no yonahit0)
men literally like rags
E'ma
ii\$ (maiso) burial/ interment
757751 (mado garasu) windowpane
VKA v 7 /%& zmanhattan keikaku) Manhattan Project
J;Umi
?&ng (mikageishil granite graianid
E #4)LEIZEng (misairu kuchikukan) Guided Missile Destroyer
E 41%)LMfifEE (misairu juny6kan) Guided Missile Cruiser
E #4)L7 U /f- ME kmisairu furigetokan) Guided Missile
Frigate
131 v

E #4)LM&H% E #4)L (misairu bogoyoyo misairu) anti-
missile missile
7195K n (mizubukure) blister/ water blister
EiEIEHQiEWSF)? (Mitsubishi Jiko Nagasaki zosensho)
Mitsubishi Heavy Industries Nagasaki Shipyard and Machinery
Works
EagEfifiFE (Mitsubishi seikosho) Mitsubishi Steel Works
E35Ei-REVEPR (Mitsubishi denki seisakusho) Mitsubishi
Electric Corporation
EgEUE imihari dair lookout point / watch tower
EFa'iliji (minkan boeii civil defense
t-mu
?%M Lmuenbotokex person who dies leaving neither family
nor relatives behind
#AD/f "/ h (mujin rokettox unmanned rocket
QMO) xmusu no innumerable: xh%;;f(D5Efis (no kuro-
koge no shitair innumerable charred bodies
???UMCTZ) xmuryoku ni suruo cripple
A?D-me
?HE omen'ekik immunity
bib omemaix dizziness/ giddiness
mmmg xmegane-bashh Spectacles Bridge
4.5-mo
3iX xmoka fierce fire/ raging flames: xfflfFihHi'B (ga
arekuruux fierce fire is spreading/ WL/Lgihi) (ni tsut-
sumarerux to catch fire
KEKE xmokuzo kaokui wooden house
??S& 5 xmokutow silent prayer: ?EILLEWWEHTXTZQ tireihi no
mae de n suruW to pray silent tribute in front of a
memorial monument

Eh. (more) leak/ leakage
\$h/Q (monpe) work pants / wartime breeches 1briztSiz1
b-ya
1312391 (yaki tsuku) to be imprinted: AFEngjffjinygr/Dkxt
(ningen no kage ga yakitsuia) A shadow of a man was
imprinted.
M331 (yake ato) burnt-out ruins/ruins after a fire
wwcrsnr; (yake tadareta) burnt: x3215 (hifu) burnt
skin/ 75711 4mm \$NKVS1fjif4S/3VbiilT7bia'Cvf; (dare mo
kare m0 w hifu ga karada kara taresagatte ita)
Everyone had burnt skin hanging down from their bodies.
ng (yakedo) burns
MHEUOD (yake nokori no) unburnt: ngm (kigire) un-
burnt pieces of wood
mm? (yakenohara) burnt field of ruins/ burnt-out area: 'lfii
UDx (ichimen no) wide stretch of burnt ruins
giffillydf (yasen bydin) field hospital/ ambulance
E551??? (yamiichi) black market/ mart
FEE (yamiya1 black marketter
Kb-yu
mm (yuketsui blood transfusion
EASIL'LE'QG (yujin uchusen) space shuttle/ space ship
Eik (yudokunai poisonous/toxic/noxious/venomous
ct-yo
53% (y6kai) meltdown: F%(Dx (kaku no) nuclear meltdown/
I???Wwx (genshironai) meltdown in the reactor
?IUJL\$&1B% (yokushi senryaku) deterrent strategy
#113313)? (yokuryusho) concentration camp/ detention camp
13%? (y6shi) proton
a_F (3'7?) 131 (y6do/yoso 131) iodine 131
7 133 i

3- F1 (yodo gusurii iodine pill
\$7258? (yoha) aftermath
?%SHE fyobi chosa) preliminary iprilimineiri/ -nari1 study
\$mm\$mgerw (yobb eisei kenkyushoi Japan National In-
stitute of Health (JNIH)
3-D '7 /i\$\$\$fif\$mjj%3% /yoroppa anzen hosh6 ky6ryoku
kaigii Conference on European Security and Co-operation
S
b-ra
:7 F (radoi rad (unit of radiation) cf. p.85
#13ng irankankr bridge railing / parapet ipeierapit)
Wi transo) ovary i01ivari1
U-ri
E353? irikukaiku gum the armed forces/ the land, sea and
air forces
EEttqgrBR trikugun kyosai byoin1 Army Mutual Aid
Hospital
BiiEEiK irikugun gunii gakkox Army Medical School
\$\$\$ng rikugunsho chosadan1 Survey Team Dispatch-
ed by the War Department
EE?E%E 1rikugun shireibu Army Headquarters
REV 55532 irikugun byoinx army hospital
QEEBM Lrikugun butai army troops
EE%E?M3IEE Lrikugun heiki hokyusho1 army ammunition
dump
iiiagiw arikujo jieitaii Ground SelfaDefense Force
(m ((1
Hfjk trisaisha survivor/victim
') ML - HLC-4 aritoru boix Little Boy 1LK Li ii' ??Friiiiiit/Wg
y, 1
i111& 1ryuzan miscarriage
\$l%t-A%% (ryushi bimu heiki) ParticleiBeam Weapon
(PBW)
\$3512 Lryoiki realm
Ell) 1ryoshin1 conscience ikeinSnns/kilmi1
F 134 ;

E'liEg (ryBSei shuy6) benign binainl tumor
\$1??? (rinkai ten) critical point
U)IWBHE (rinpa saib6) lymphocyte Hfmfasiitl
U ///%\$ (rinpasen) lymph gland
h're
E (rei) soul/spirit: N??Eidbz) (o nagusameru) to comfort
the spirits/ xfzi/DZQ (o matsu) to offer prayers for the
sake of the soul
AAHWJ (reikyakuzai) coolant
;% if Lreikyaku h6) cooling system
1/ 475_\$251\$% (r&za kakuyflgb) laser nuclear fusion
l/A (remu) remta corrected unit of radiation) of .p.85: AMWD
u y k 'r'v ME (jintai no rentogen toryb) the amount of
rentogen in a human body
E35533? (reng6 kantai1 combined fleet
EJi (renpei) drill / parade: x1953 (jo) drill ground / parade
ground
JE%T\$9;%% (renraku kyogikai) liaison council
5-r0
F11) (roshin) reactor core
:15 - wa
'7771 / (wakuchini vaccine Waeksizn/4w1
'7JL3/ v '7,%\$'U%t% (warushawa joyaku kikoK Warsaw Trea-
ty Organization (WTO)/ Warsaw pact
7 1:43 7

\$(VA,
(sakuin)
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Final Remark

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