ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Decommissioning plan and technologies
2	Background of above need	1. Design life of Qinshan NPP is 30 years, and it has been put into operation for more than 20 years. Qinshan NPP has to confront with the choice of decommissioning in the coming years. 2. China has a plan to build more NPP in the near future. One of the design criteria for NPP is facilitating decommissioning. 3. We are lack of the actual experiences of decommissioning commercial reactor. 4. Our job is to conduct technical review of radioactive waste management and decommissioning. We urgently need knowledge of decommissioning.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety [F.] Policy/ Planning/ Administration [G.] Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	Reading recommended documents, On site investigation/Facility visit, Lecture, Practice, Discussion, Preparing a research report etc. (3 – 6 months)
8	Background of a trainee	Engineers of Radioactive Waste Management and Decommissioning.
9	Any comment	N

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Advanced Radioactive Wastewater Treatment Technologies
2	Background of above need	1. Radioactive waste water treatment is one of the most important topics for the development and utilization of nuclear energy. 2. China has a plan to build more NPP in the near future. 3. Our job is to conduct technical review of radioactive waste management and decommissioning. We urgently need more knowledge of radioactive wastewater treatment technologies .
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration [G.] Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	Reading recommended documents, Participating in experiments, On site investigation/Facility visit, Lecture, Discussion, Preparing a research report etc. (3 – 6 months)
8	Background of a trainee	Engineers of Radioactive Waste Management and Decommissioning.
9	Any comment	N

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Advanced Radioactive Solid Waste Treatment and Disposal Technologies
2	Background of above need	1. Radioactive solid waste treatment and disposal is one of the most important topics for the development and utilization of nuclear energy. 2. China has a plan to build more NPP in the near future. 3. Our job is to conduct technical review of radioactive waste management and decommissioning. We urgently need more knowledge of radioactive solid waste treatment and disposal technologies.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration [G.] Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	Reading recommended documents, Participating in experiments, On site investigation/Facility visit, Lecture, Discussion, Preparing a research report etc. (3 – 6 months)
8	Background of a trainee	Engineers of Radioactive Waste Management and Decommissioning.
9	Any comment	N

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Nuclear and radiation safety regulations.
2	Background of above need	For work.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety [F.] Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	High [Medium] Low
7	Preferable method and duration	A 2-weeks training.
8	Background of a trainee	The trainee should work in nuclear and radiation safety regulation.
9	Any comment	No.
*Please fill in one need in one sheet. If you have more needs, please go to following sheet.		

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Seismic margin analysis of equipment in nuclear power plant.
2	Background of above need	The Great East Japan Mw9.0 Earthquake on 11 March 2011 resulted in a series of large tsunami waves beyond the design basis criteria of earthquake at Fukushima Daiichi Nuclear Power Plants. The fragility analysis of equipment based on large experiments. Thus, we want to learn method and parameter of fragility analysis of equipment.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	・ learn the fragility analysis of equipments ・ duration maybe 3-6 months
8	Background of a trainee	・ supervising Nuclear power plant under construction ・ Ph.D.
9	Any comment	

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Nuclear Emergency
2	Background of above need	I work in the department of nuclear emergency response . My major is radiation protection.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Practice and lecture
8	Background of a trainee	work at least 5 years
9	Any comment	

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	1. Scientific and engineering design of experimental facility. 2. Experiments design. 3. Instrumentation allocation. 4. Results evaluation and application on prototype.
2	Background of above need	According to the law, any innovation or change without verification and validation should be checked and evaluated by corresponding experiment. And, the softwares using for design and analysis accidents should be V&V with real experimental data before application, because of limited parameter ranges. Thus, to achieve that goal, it's necessary to perform accurate and effective experiment.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	One or two weeks of theoretical course; At least 3 weeks of engineering practice.
8	Background of a trainee	
9	Any comment	

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	The training/education about experiment facilities used for verification of design or code development.
2	Background of above need	Experimental verification has played a more important role in new design or new code development in China. The integral effects experimental and separate effects experimental facilities are key hardware in experimental verification process.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration [G.] Others
4	Level	Advanced [Medium] Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	[High] Medium Low
7	Preferable method and duration	Inviting foreign experts to show what should be done for establishing a test facility. Besides, Visiting the test facilities or participating the tests in JAERI are also a good method. The duration is about 2 month or more.
8	Background of a trainee	The staffs mastering thermo-hydraulic or scaling are recommended.
9	Any comment	

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	irradiation surveillance of reactor vessel
2	Background of above need	Because of irradiation brittlement effect, nuclear power plant need monitor changes of mechanical properties of reactor pressure vessel throughout the service life. However，our country do not have much experience on this aspect 。So I hope attend to train and communicate the topic concerning reactor vessel irradiation surveillance”。The content includes but not limited to mechanical test specimen, neutron flux and thermal monitor instrumentation, capsule installation and withdraw schedule, surveillance program test and test results evaluation.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Preferable method may be classroom lecture and visit laboratory. Duration may be one month.
8	Background of a trainee	Bachelor degree of material science and engineering。five years’ experience of nuclear plant safety review
9	Any comment	

ANTEP 2015 Needs from China (NNSA)

No.	Items	Entry Column
1	Content of training/education that you need	Main coolant pump test
2	Background of above need	Main coolant pump is an important component of nuclear plant and requires several tests to verify its functions and reliability. But in our country, we do not have the unified basis or standard of main coolant pump test, so always we can see different test items or distinct test requirements or test methods and test procedure defined by pump manufacture in similar nuclear plants. It makes some difficulties to review. Therefore we need to learn and communicate about the tests of main coolant pump, including but not limited to factory tests and qualification tests。
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Preferable method may be classroom lecture，visiting pump factory and watch the pump tests。 Duration may be three month.
8	Background of a trainee	Bachelor degree Five years' experience of nuclear safety review
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Site development plan
2	Background of above need	Indonesia is planning to construct and operate an experimental power reactor (EPR) as an effort to fulfill the mandate of the Law No. 17 for the 3rd Medium-Term Development Plan (2015-2019). The program to build and operate an experimental power reactor in Indonesia is expected to yield significant benefits for the society. The EPR can accelerate the development of nuclear technology in Indonesia. Applications from the EPR will give added value to the existing local natural resources, hence serve as a mockup to meet supply of raw materials for industry that currently relies on imports. Siting is an important aspect prior to the construction and operation of the EPR. After foing site evaluation, site development plan has to be done to make the site ready for construction. This training course is aimed for capacity building of personnel related to site evaluation and site preparation act.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority (Please circle)	High Medium Low
7	Preferable method and duration	Training (3 weeks)
8	Background of a trainee	Persons who in charge in siting. Master degree in related field
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Design of cogeneration system coupled with a small power HTR
2	Background of above need	Indonesia is planning to construct and operate an experimental power reactor (EPR) as an effort to fulfill the mandate of the Law No. 17 for the 3rd Medium-Term Development Plan (2015-2019). The program to build and operate an experimental power reactor in Indonesia is expected to yield significant benefits for the society. The EPR can accelerate the development of nuclear technology in Indonesia. Applications from the EPR will give added value to the existing local natural resources, hence serve as a mockup to meet supply of raw materials for industry that currently relies on imports. The EPR is also intended to be used to explore possibility of heat utilization for industrial process in a framework of cogeneration system. The training is necessary to enhance human resource development to develop design and engineering of cogeneration system.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	Training (2 weeks)
8	Background of a trainee	Officers related to utilization of nuclear energy. University degree
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Implementation of aging management on Interim Storage for Spent Fuel
2	Background of above need	To acquire knowledge on implementation of aging management on Interim Storage for Spent Fuel
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	Training/Workshop (2 weeks)
8	Background of a trainee	Person who has an authority or in charge in the related field. Master degree
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Radioactive waste management generated from decontamination and decommissioning activity.
2	Background of above need	To acquire knowledge on development of radioactive waste management generated from decontamination and decommissioning activity
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	OJT (1-2 months)
8	Background of a trainee	Engineers who work in Radioactive Waste Management or related field
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Development of radioactive waste management information system
2	Background of above need	To acquire knowledge on development of radioactive waste management information system
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority)	High [Medium] Low
7	Preferable method and duration	Training (2-3 weeks)
8	Background of a trainee	Engineers who work in Radioactive Waste Management or related field.
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Safety assessment, engineering, safety engineering, reactor behavior, reactor physics, water chemistry, instrumentation, decommissioning, fuel material
2	Background of above need	Enhancing knowledge and experience for reactor workforces
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Training/Workshop (2 weeks)
8	Background of a trainee	Reactor operator, Regulators, Engineer/scientist in related field
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Reactor material science and fuel cycle
2	Background of above need	Indonesia has three research reactors and some other nuclear installations such as fuel fabrication facility, waste management facility, etc. We have many experts on reactor analysis, unfortunately the experts on fuel cycle safety and material science are still rare.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	Training/Workshop (2-3 weeks)
8	Background of a trainee	Persons who work in related field. Master degree
9	Any comment	

ANTEP 2015 Needs from Indonesia (BAPETEN)

No.	Items	Entry Column
1	Content of training/education that you need	Management of Training
2	Background of above need	To gain a better strategies on training management, especially on nuclear technology training courses.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Training/Workshop (2 weeks)
8	Background of a trainee	Persons who have the authority in related field. Training managers. Master degree
9	Any comment	

ANTEP 2015 Needs from Kazakhstan

No.	Items	Entry Column
1	Content of training/education that you need	Radioactive waste treatment technology
2	Background of above need	The problem of radiation waste management is very important for Kazakhstan since there were a few nuclear test sites on the country's territory and one breeding power reactor (BN-350) which is on stage of decommission now. Therefore Kazakhstan needs advanced experience in the field of radioactive waste treatment and other aspects of the problem
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	3-6 months, lectures, practical works
8	Background of a trainee	Master of engineering, PhD
9	Any comment	

ANTEP 2015 Needs from Kazakhstan

No.	Items	Entry Column
1	Content of training/education that you need	Radiation technologies application for agriculture and their promoting
2	Background of above need	Kazakhstan has very few specialists in the field of radiation technologies for agriculture application. Kazakhstan needs to study international experience in the field of radiation technologies application for agriculture (as biofertilizers, super water absorbents, etc.) and their promoting
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	3-6 months, lectures, practical work
8	Background of a trainee	master of engineering, PhD
9	Any comment	

ANTEP 2015 Needs from Kazakhstan

No.	Items	Entry Column
1	Content of training/education that you need	Reactor material science and nuclear fuel cycle
2	Background of above need	Kazakhstan possesses rich uranium and metallic ore resources. Kazakhstan is planning diversification of raw economy to the economy based on metallurgy of advanced processing. Therefore we need specialists in the field of reactor material science and nuclear fuel cycle.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	3-6 months, lectures, practical work
8	Background of a trainee	master, PhD
9	Any comment	

ANTEP 2015 Needs from Kazakhstan

No.	Question	Entry Column
1	Content of training/education that you need	Nuclear and radiation safety
2	Background of above need	Nuclear and radiation safety is one of the most important issues nowadays. The degree of people trust and positive attitude to the nuclear power development strongly depend on the degree of its safety and reliability. To provide sufficiently high level degree of safety we need skilled specialists who had seized advanced experience in this field
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	3-6 months, lectures, practical work
8	Background of a trainee	master
9	Any comment	

ANTEP 2015 Needs from Kazakhstan

No.	Question	Entry Column
1	Content of training/education that you need	Planning, social policy and management in the field of nuclear power production development and nuclear technologies promotion
2	Background of above need	Kazakhstan during recent years is announcing the determination to construct nuclear power plant. The process appeared to be protracted due to poor planning and management. The same problem with transferring of nuclear technologies into broad application. Specialists with good abilities in the field of planning, social policy and management in the field of nuclear power production development and nuclear technologies promotion are highly demanded in our country. We have no much experience in training specialists on sufficiently high level. We would like to get acquainted with such experience of other countries which are success in this field.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety [F.] Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] [Invite foreign expert]
6	Priority	[High] Medium Low
7	Preferable method and duration	2-4 weeks, seminar
8	Background of a trainee	governmental officers, administrative workers
9	Any comment	

ANTEP 2015 Needs from Malaysia

No.	Items	Entry Column
1	Content of training/education that you need	Nuclear Public Information and Public Awareness (PIPA)
2	Background of above need	Malaysia is considering to embark on nuclear power programme for the future electricity generation. Therefore, there is a need to develop a national programme for PIPA, so that interaction between the nuclear industry and the public will be in favour for the government decision. Thus, Malaysia would like to learn strategies, experiences and methods demonstrated in other countries such as Japan, French, etc.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration [G.] Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] [Invite foreign expert]
6	Priority	[High] Medium Low
7	Preferable method and duration	Seminar/Expert talk/lecture on the experience. Fellowship program. Join research in public information and public awareness. Join a tour to public information facilities. Duration 1 to 3 months
8	Background of a trainee	Officer who takes charge in policy planning, lecturers, public relation officer
9	Any comment	

ANTEP 2015 Needs from Mongolia

No.	Items	Entry Column
1	Content of training/education that you need	Ensuring safety at disposal and production of radiation isotope in medical and research centers, and legal environment for disposal facilities and radiation safety, security and safeguards
2	Background of above need	To ensure safety of radiation isotope, which are at the disposal of production, medical and research centers. To develop structures for training and improvement of professional skills of the national certificated specialists in our country in the field of radioactive minerals, nuclear energy and high technology. To develop and implement legal environment consistent with international standard for disposal facilities and radiation safety, security, safeguards
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] [Medium] [Basic]
5	Type	[Go to abroad] [Invite foreign expert]
6	Priority	High [Medium] Low
7	Preferable method and duration	Short-term training courses (1~3 weeks) for staffs Medium-term training courses (1~3 months) for inspectors and officers Long-term training/edication programs (3~12 months) for researcher fellows Possible method will be training, seminar, OJT
8	Background of a trainee	Staffs from universities, medical and research centers /Inspectors and officers from governmental authorities and agencies Researcher fellows from universities and research centers / Their background will be nuclear physics, radiobiology, radiochemistry, 5-10 persons
9	Any comment	

ANTEP 2015 Needs from Mongolia

No.	Items	Entry Column
1	Content of training/education that you need	To develop environmental monitoring system and to organize legislative base for nuclear energy and radioactive minerals
2	Background of above need	To take measures to develop national infrastructure and monitoring system for nuclear and radiation safety, meeting the demands of international standard, and to prepare of managers who understand the main objectives in field of nuclear energy, radiation application technology and radiation safety and security , To organize legislative base for use nuclear energy and radioactive minerals.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety [F.] Policy/ Planning/ Administration G. Others
4	Level	[Advanced] [Medium] [Basic]
5	Type	[Go to abroad] [Invite foreign expert]
6	Priority	[High] Medium Low
7	Preferable method and duration	Short-term training courses (1~3 weeks) for staffs Medium-term training courses (1~3 months) for inspectors and officers Possible method will be training, seminar, OJT
8	Background of a trainee	・ Staffs from universities, medical and research centers ・ Inspectors and officers from governmental authorities and agencies ・ Their back ground will be nuclear physics, radiobiology, radiochemistry, economic, law, 5-10 persons
9	Any comment	

ANTEP 2015 Needs from Mongolia

No.	Items	Entry Column
1	Content of training/education that you need	Development and implementation of legal environment for radioactive minerals, nuclear energy and radiation application
2	Background of above need	To develop and implement legal environment consistent with international Standard for the exploration, exploitation, processing, enriching of radioactive minerals and for the exploitation of nuclear energy, advanced applications of radiation technology in the areas of health care, agriculture, environment and industry. And to adopt IAEA standards for environmental impact assessment for uranium mine, mill and nuclear facilities
3	Field	A. Radioactive Waste Management [B.] Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] [Medium] [Basic]
5	Type	[Go to abroad] [Invite foreign expert]
6	Priority	[High] [Medium] Low
7	Preferable method and duration	Short-term training courses (1~3 weeks) for workers Medium-term training courses (1~3 months) for inspectors and officers Long-term training courses (3~12 months) for researchers Method will be training, seminar, OJT
8	Background of a trainee	・ *Workers from universities, medical and research centers ・ *Inspectors and officers from governmental authority and agencies ・ *Researchers from universities and research centers ・ Their back ground will be nuclear physics, radiobiology, radiochemistry, engineering, chemistry, nuclear medical phisics, 20 persons
9	Any comment	

ANTEP 2015 Needs from Thailand (EGAT)

No.	Items	Entry Column
1	Content of training/education that you need	Radiation protection program ・ Work planning in radiation control area ・ Radiation work permit ・ Dose mapping ・ Radiation protection organization Radiation monitoring ・ Radiation monitoring instrument and management in nuclear power plant ・ Radiation monitoring instrument and management for personal Action in emergency situation in power plant ・ Emergency response and preparedness in every level of emergency
2	Background of above need	We now in early state of nuclear power plant project. We need to learn about radiation protection program in nuclear power plant so that we can establish our own radiation protection program for upcoming project.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High Medium [Low]
7	Preferable method and duration	2 weeks OJT
8	Background of a trainee	・ Master degree in Nuclear Technology or Science ・ Officers who have knowledge of radiation protection and monitoring
9	Any comment	

ANTEP 2015 Needs from Thailand (EGAT)

No.	Items	Entry Column
1	Content of training/education that you need	Environmental Radiation monitoring ・ The design and management of environmental radiation monitoring program for NPP (pre-operation, operation, emergency) Dispersion model ・ To predict radionuclide discharged from NPP to people and environment (Pathway of exposure that should be considered of monitoring in case of normal operation and accident)
2	Background of above need	1. To set up environmental radiation monitoring for NPP 2. To make the operation system of environmental monitoring in the occurrence of abnormal or emergency. 3. To learn how to estimate exposures for general public. 4. To estimate the tendencies of accumulation of radioactive materials in the environment.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	2 weeks OJT
8	Background of a trainee	・ Master degree in Nuclear Technology or Science ・ Officers who have knowledge of Environmental radiation monitoring
9	Any comment	

ANTEP 2015 Needs from Thailand (EGAT)

No.	Items	Entry Column
1	Content of training/education that you need	1. Severe Accident Countermeasure requirements 2. Evaluation of the Effectiveness of Countermeasures against Severe Accidents
2	Background of above need	To analyze the countermeasures against severe accident of the reactor types that are suitable for Thailand
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	2 weeks training
8	Background of a trainee	Nuclear Engineer
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Safety/Safety Assessment
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are preparing about Safety Analysis Reports for regulations. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT), but we do not have much experience on radiation safety and safety assessment. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct safety assessment activities in a structured manner.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to safety, assessment. 2) Classroom lecture on the experiences of radiation safety 3) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree ; Nuclear Physics
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Facilities related to RWM
2	Background of above need	In our University, SUT has intent to try to establish credibility of Boron Neutron Capture Therapy Center (BNCT) for research and education. We are preparing about Safety Analysis Reports for regulator, But we do not have much experience on radioactive waste management (RWM),Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct facilities related to radioactive waste management (RWM) activities in a structured manner.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Classroom lecture on the experiences of radioactive waste management (RWM). 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree ; Nuclear Physics
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Spent Radiation Source
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a new reactor of us. That, we do not have much method and experience on spent radiation source. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct spent radiation source activities in a structured manner.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	1) Role playing method to learn how to spent radiation source. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree ; Nuclear Physics
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Technologies Applied to RWM
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). That, we do not have much knowledge of technologies and experience applied to radioactive waste management. Thus, we want to learn other country's strategies, experiences and technologies applied for RWM, so that we can conduct about Technologies Applied to RWM activities in a structured manner.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to use technologies for RWM. 2) Classroom lecture on the experiences of radioactive waste management. 3) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree ; Nuclear Physics
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Transportation
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a first reactor of us. That, we do not have much experience on transportation for radiation waste. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct transportation activities in a structured manner.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to plan for transportation. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety. 2) University degree
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Safety Analysis/Assessment
2	Background of above need	In our University, SUT is acquiring a new Miniature Neutron Source Reactor for research and education. We are preparing about Safety Analysis Reports for regulator. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT), but we do not have much method and experience on reactor and safety assessment. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct safety analysis assessment activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	1) Role playing method to learn how to safety, assessment. 2) Classroom lecture on the experiences of safety analysis assessment. 3) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree; Physics, Engineering.
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Safety Engineering
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. We are preparing about Safety Analysis Reports for regulator, but we do not have much method and experience on safety engineering, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct safety engineering activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	1) Classroom lecture on the methods and experiences of safety engineering. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree ; Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Reactor Physics
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a first reactor of us. That, we do not have much method and expert on reactor and systems. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct reactor activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	1) Role playing method to learn how to control reactor systems. 2) Classroom lecture on the experiences of reactor systems 3) Duration may be one/two month.
8	Background of a trainee	1) Officers who takes charge of operator 2) University degree ; Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Inspection/Operation/Maintenance/Aging Management
2	Background of above need	In our University, SUT is acquiring a new Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a first reactor of us. That, we do not have much method and experience on inspection, operator, maintenance and aging management. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct about inspection, operator, maintenance and aging management activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	1) Role playing method to learn how to operate and maintenance with a safety. 2) Classroom lecture on the experiences of inspection, operator, maintenance and aging management. 3) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of operator 2) University degree ; Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Decommissioning
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. We are preparing about Safety Analysis Reports (SARs) for regulator, The Part of decommissioning is very famous and so difficult for a new reactor, but we do not have much method and experience on decommissioning, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct decommissioning activities in a structured manner of SARs.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	1) Role playing method to learn how to plan for decommissioning. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear policy nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Reactor Testing
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. The reactor testing is coming soon of us. This Part is very hard for us. Because, we do not have much knowledge and have not experience on reactor testing, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct reactor testing activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to setup and testing. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Research reactor
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. We are preparing about Safety Analysis Reports (SARs) for regulator, The Part of research reactor is very famous in SARs, That we will to know about of systems and process of a new reactor, And we do not have much method and experience on its. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct research reactor activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to use a research reactor. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Equipment Management
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. But we do not have much method and experience on equipment management, Thus, we want to learn other country's strategies, experiences and methods of management, so that we can conduct equipment management activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	1) Role playing method to learn how to management for nuclear equipment. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Thermal & Hydraulics
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. The Part of thermal & hydraulics is very famous and difficult for used of us. We do not have much method and experience on thermal and hydraulics, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct thermal and hydraulics activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application [C.] Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to use and control of thermal and hydraulics for reactor. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Fuel Cycle
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a new reactor of us. That, we do not have much knowledge and experience on fuel cycle. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct reactor activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Classroom lecture on method to learn how to use fuel and material. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator 2) University degree ; Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Transportation
2	Background of above need	In our University, SUT has intent to try to establish credibility of Boron Neutron Capture Therapy Center (BNCT) for research and education. Fuel and material are coming in the future. We will to plan about transportation for fuel in Safety Analysis Reports for regulator, but we do not have much experience on these, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct transportation activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Classroom lecture on the experiences of fuel and material of radiation. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree ; Nuclear Physics
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Post Irradiation Examination (PIE)
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a first reactor of us. That, we do not have much method and experience on reactor and Irradiation systems. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct post irradiation examination activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	1) Classroom lecture on the experiences of post Irradiation Examination. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of operator 2) University degree ; Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Engineering
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a new reactor of us. That, we do not have much method, experience and expert on engineering of fuel and material. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct about engineering of fuel and material activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor [D.] Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to use fuel and material for safety. 2) Classroom lecture on the experiences of fuel and material. 3) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of operator 2) University degree ; Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Nuclear Safety Culture
2	Background of above need	In our University, SUT is acquiring a new Miniature Neutron Source Reactor for research and education. We are preparing about nuclear safety culture for all of staffs and people in our university. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT), but we do not have much knowledge and experience on nuclear safety culture. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct nuclear safety culture activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Classroom lecture on the experiences of nuclear safety culture. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree; Nuclear Physics.
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Safety Analysis
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. We are preparing about Safety Analysis Reports for regulator, but we do not have much method and experience on safety, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct safety analysis activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Classroom lecture on the methods and experiences of safety analysis. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety. 2) University degree; Nuclear Physics.
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Safety Management System - Accident Analysis
2	Background of above need	In our University, SUT has intent to build a Miniature Neutron Source Reactor for research and education. We are trying to establish credibility of Boron Neutron Capture Therapy Center (BNCT). It's a first reactor of us. That, we do not have much method and experience on safety management system for accident analysis. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct safety management system activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	High [Medium] Low
7	Preferable method and duration	1) Role playing method to learn how to analysis of nuclear accident. 2) Classroom lecture on the experiences of safety management system. 3) Duration may be one/two month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree ; Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Radiation Instrumentation, Measurement, Monitoring
2	Background of above need	In our University, SUT has intent to try to establish credibility of Boron Neutron Capture Therapy Center (BNCT) for research and education. We are preparing about Safety Analysis Reports for regulator, but we do not have much experience on radioactivity monitoring, environmental radioactivity and measurement. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct radiation instrument and monitoring activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Classroom lecture on the experiences of radiation measurement, monitoring. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety 2) University degree; Nuclear Physics.
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Radiation Effect to Environment
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. We are preparing about Safety Analysis Reports (SARs) for regulator, The Part of Environment is very famous for public and so difficult to control, We do not have much knowledge and experience on radiation effect to environment, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct radiation effect to environment activities in a structured manner of SARs.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to safe environment. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear policy and nuclear safety. 2) University degree: Nuclear Physics.
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Radiation Effect to Health
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. The health of staffs and people in public was to focus from regulator, This Part is very sensitive for all. And we do not have much knowledge and have not experience on radiation effect health, Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct radiation effect to health activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to work with radiation. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Radiation Protection
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. The Part of radiation Protection is very famous in system of research reactor, That we will to know about of radiation protection, But we do not have much experience on its. Thus, we want to learn other country's strategies, experiences and methods, so that we can conduct radiation protection activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to protected radiation from reactor. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Radiation Monitoring, Measurement
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. Radiation monitoring is one of the most important in process of nuclear safety. But, we do not have much method, equipment, experience and expert on radiation monitoring and measurement, Thus, we want to learn other country's strategies, experiences and methods of management, so that we can conduct radiation monitoring measurement activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to measure for nuclear radiation. 2) Duration may be one month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety. 2) University degree: Nuclear Physics.
9	Any comment	

ANTEP 2015 Needs from Thailand (SUT)

No.	Items	Entry Column
1	Content of training/education that you need	Determination of Radionuclides
2	Background of above need	In our University, SUT is acquiring a first research reactor for Boron Neutron Capture Therapy Center (BNCT) and education. Determination of Radionuclides is one of the most important parts in process of nuclear safety. But, we do not have much method, equipment, experience and expert on its, Thus, we want to learn other country's strategies, experiences and methods of management, so that we can conduct determination of radionuclides activities in a structured manner.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material [E.] Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	1) Role playing method to learn how to control radionuclide from determinate. 2) Duration may be one/two month.
8	Background of a trainee	1) Officers who takes charge of nuclear safety and operator. 2) University degree: Physics, Engineering
9	Any comment	

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	Cyclotron engineering, operation and maintenance (for a 30 MeV cyclotron)
2	Background of above need	Thailand Institute of Nuclear Technology is in the process of acquiring a 30 MeV cyclotron for radioisotope production and research studies. The facility construction is expected to be completed in 2020. We are in urgent need of a knowledgeable engineer who will be able to supervise the running of the facility and its routine maintenance.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Go abroad and spend time at a cyclotron facility for 1 – 3 months
8	Background of a trainee	Electrical engineering or mechanical engineering
9	Any comment	Training abroad will allow our staff to get hands-on experience on the operation and maintenance of such a facility, which is extremely important for future operation of our facility.

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	Beamline engineering and physics (for a 30 MeV cyclotron)
2	Background of above need	Thailand Institute of Nuclear Technology is in the process of acquiring a 30 MeV cyclotron for radioisotope production and research studies. The facility construction is expected to be completed in 2020. The facility will have a dedicated analytical beamline for applications such as PIXE, PIGE and RBS. A possibility of installing a microbeam is envisioned and also the development of additional analytical tools and equipment. A knowledge related to beamline construction and modification as well as the construction or the assembly of related analytical apparatus is needed for future beamline development and future research programs.
3	Field	A. Radioactive Waste Management [B.] Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] [Invite foreign expert]
6	Priority	High [Medium] Low
7	Preferable method and duration	Go abroad and spend time at a cyclotron facility that built or modified their own research beamline; 2 weeks – 3 months
8	Background of a trainee	Physics
9	Any comment	Training abroad will allow our staff to get hands-on experience with the beam, how it works and how it can be modified. A visit by an expert with research experiences on high-energy ion beam physics and applications will also be very helpful.

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	PIC/S GMP SPECT/PET radioisotope production facility (preferably in association with a 30 MeV cyclotron)
2	Background of above need	Thailand Institute of Nuclear Technology is in the process of acquiring a 30 MeV cyclotron for radioisotope production and research studies. The facility construction is expected to be completed in 2020. We plan to produce both SPECT and PET radiopharmaceuticals and supply them to hospitals in Thailand and neighboring countries (if possible). The production facility must be PIC/S GMP compliant in order to comply with Thai FDA requirements. The knowledge regarding the facility layout, operation, quality control, facility and equipment maintenance, the flow of the production process and other related topics is urgently needed.
3	Field	A. Radioactive Waste Management [B.] Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] Medium Basic
5	Type	[Go to abroad] Invite foreign expert
6	Priority	[High] Medium Low
7	Preferable method and duration	A scientific visit of 1 week – 1 month.
8	Background of a trainee	Radiopharmaceutical production
9	Any comment	Urgently needed.

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	Utilization of 30 MeV cyclotron in research (applications in various fields)
2	Background of above need	Thailand Institute of Nuclear Technology is in the process of acquiring a 30 MeV cyclotron for radioisotope production and research studies. The facility construction is expected to be completed in 2020. The facility will have two research beamlines which can also be used for irradiation and analytical services. We need training/education on the applications of cyclotrons in analytical research, radiation biology research, solid state and materials research and anything that a 30 MeV cyclotron can be used for. This will help us prioritize and plan our future research programs and future development at beam terminals.
3	Field	A. Radioactive Waste Management [B.] Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] [Medium] Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	High [Medium] Low
7	Preferable method and duration	An expert visit for 1 – 2 weeks
8	Background of a trainee	Research scientists in physics, chemistry, biology and other related sciences such as environment.
9	Any comment	Lectures and discussions on various cyclotron applications and their set-up will be satisfied.

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	Utilization of 5 MeV electron beam in research (applications in various fields especially polymer science and radiation processing)
2	Background of above need	Thailand Institute of Nuclear Technology will be installing a new 5 MeV electron beam facility for irradiation service as well as research. We want to learn more about the applications of 5 MeV electron beam in various research fields: chemistry, biology, environment, waste water management and polymer radiation processing
3	Field	A. Radioactive Waste Management [B.] Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	[Advanced] [Medium] Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	High [Medium] Low
7	Preferable method and duration	An expert visit for 1 – 2 weeks
8	Background of a trainee	Research scientists in physics, chemistry, biology and other related sciences such as environment.
9	Any comment	Lectures and discussions on various electron beam applications and their set-up will be satisfied.
*Please fill in one need in one sheet. If you have more needs, please go to following sheet.		

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	All topics concerned with security culture
2	Background of above need	The nuclear security is one of the global concern. To establish the nuclear security culture, it is vital to raise awareness on nuclear security in all staff level, especially in management level, the decision level, which can top down the security policy in order to effectively execute and establish the nuclear security culture in an organization.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced Medium Basic
5	Type	Go to abroad Invite foreign expert
6	Priority	High Medium Low
7	Preferable method and duration	Lecture and Presentation, 5 days
8	Background of a trainee	Top and middle management, most of them have the scientific or engineering background.
9	Any comment	
*Please fill in one need in one sheet. If you have more needs, please go to following sheet.		

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	Remediation of radioactive contamination in soil from Monazite extraction plant and management of its radioactive waste.
2	Background of above need	In Thailand Institute of Nuclear Technology (TINT), we have an activity of Monazite extraction for research and development. Now the pilot plant is shutdown. We found the radioactive contamination on soil and environment around this plant. We have no much experience on Remediation technology as well as Decontamination techniques. Thus, we would like to learn other country's technologies, experience and methods, so that we can conduct the remediation project to clean up the area and handling radioactive waste in appropriate ways.
3	Field	[A.] Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	[High] Medium Low
7	Preferable method and duration	・ Classroom lecture on the experience of Remediation of radioactive contamination in soil and management of its radioactive waste. ・ Site visit to the Monazite extraction plant ・ Method of Waste Inventory ・ Method of Waste Management ・ Duration may be one month
8	Background of a trainee	・ Radioactive waste management staff who are in charge ・ Researcher who are in charge ・ Radiation Safety Officer ・ University degree
9	Any comment	

ANTEP 2015 Needs from Thailand (TINT)

No.	Items	Entry Column
1	Content of training/education that you need	HRD on nuclear communicators
2	Background of above need (Why do you need above-mentioned training/education?)	Even though Thailand has been utilizing the nuclear technology for national development for long time, the public awareness on the contribution of nuclear technology has still to be raised. How to communicate with the public with wide range of perception, background knowledge, and education is significant for raising public awareness and the capacity building for our manpower in this area is vital in order to effectively promote the utilization of nuclear technology and help support the promotion of nuclear power in the country.
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety [F.] Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	[High] Medium Low
7	Preferable method and duration	Lectures and hand on experiment
8	Background of a trainee	1. those with scientific background to develop their communication ability to the general public 2. those without scientific background to develop their science communication
9	Any comment	

ANTEP 2015 Needs from Vietnam

No.	Question	Entry Column
1	Content of training/education that you need	Instructor Training Program, Follow up Training Course on Nuclear Energy
2	Background of above need	To support transfer of nuclear-related knowledge, skills and experience to young members working in nuclear energy and related fields
3	Field	A. Radioactive Waste Management B. Radiation/RI Application C. Reactor D. Fuel/Material E. Nuclear/Radiation Safety F. Policy/ Planning/ Administration G. Others
4	Level	Advanced [Medium] Basic
5	Type	Go to abroad [Invite foreign expert]
6	Priority	High [Medium] Low
7	Preferable method and duration	On job training in 2-3 weeks
8	Background of a trainee	The cadres of VINATOM, Universities
9	Any comment	