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**[STRATEGIC INFORMATION  
SECURITY]**

## TASK-1

### ORGANISATIONAL BACKGROUND:

In this paper, I took Nuclear and science technology in Australia. This organization is considered as a care taker of overall landmark infrastructure in Australia. The Australian Nuclear Science and Technology which is commonly known as ANSTO is making use of nuclear science to help people, environment and the industry. During April 15, 1953, Australia enrolled into the nuclear science field (Fox, 2010). At that time the Atomic Energy Act came into existence. In the past 50 years of lifetime the researchers mainly worked for the first nuclear research reactor in Australia. This reactor helps to create millions and millions of radiopharmaceuticals. These radiopharmaceuticals were utilized for nuclear medicine. The nuclear medicine offered by this reactor has saved a generation of Australians. It is also used for building the houses. They structured Australian's first reactor namely HIFAR. It was the one among the 70 reactors all over the world which has the capability to provide more medical radioisotopes than the needed. The usage of HIFAR helps to produce more number of radio isotopes for medical functions and also for the industries. It offers silicon transformation doping for the semiconductor company (Fox, 2010). They offer Delayed Neutron analysis and Neutron Activation Analysis for forensic determination and also for mining industry. The manufacture of gamma rays is used as resources for the sterilization use, organizations and cancer therapy. The Neutron diffraction analysis is utilized for the research of matter. Hence the HIFAR research reactor (James et al., 2005) has functioned reliably and safely for more than 50 years.

The main objective of the HIFAR is to provide neutrons for scientific purpose and for the manufacture of nuclear medicine. HIFAR initiated the technique called fission to provide the neutrons. The process is dividing the huge atom of uranium into small neutrons. Moreover the fission takes place when heavy nucleus takes in neutrons and divides. The left over neutrons produced at the time of fission process were utilized to hold the fission process still moving (James et al., 2005). The HIFAR offers billions of neutrons every second at the time of rated power. The elements used in the reactor take most of the

neutrons inside. So it is the necessity of the reactor to produce more neutrons to serve its function.

The products and services offered by the ANSTO are ANSTO health, ANSTO minerals, Silicon irradiation services, radiation services, ANSTO synro, Activity standards laboratory, Neutron Activation analysis, dosimeter services and Gamma irradiation ANSTO helps to find answers in environmental science and health. It is the centre to Australia's nuclear medicine production capabilities (Sundaram, 2011). Each week it manufactures lifesaving nuclear medicines. They have big collaborations with other organizations as well as Australian scientists. It has a successful history in applied research. As a commercial partner it supports other Australian organizations and businesses .It provides valuable advice to the government of Australia and directs on all issues related to technology, nuclear science and engineering.

The mission and vision of ANTSO is to offer perfection in the change, seeking and insight through our people, nuclear expertise and partnerships in Australia. Based on the ANSTO Act 1987 the core operations of the organizations are to perform research and development with respect to the nuclear science and technology. To produce and utilize the isotopic techniques, radio isotopes and nuclear radiation for the fields of science, medicine, science, commerce, agriculture and commerce (Creagh et al., 2016). It helps to strengthen and promote the application from research and development reports. It helps to control the radioactive wastes and materials origin from different activities. It helps to produce goods and services relevant to the core activities. The organization offers advice to the government and launch international communication related to nuclear components. It makes all the equipment's, expertise and facilities available for the analysis in nuclear science and technology. It distributes the technical and scientific documents, papers and periodicals (Sundaram, 2011)..

The core functions are the primary components regarding the working nature and relationship among each other in the organization. The ANSTO has six core functions which help to bring success to the organization (Sundaram, 2011). They are curiosity, Leadership, Excellency, Team work, safety, secureness, sustainability and Trust and respect.


The key challenges faced by the ANTSO in the organization are the usability studies disclose the problems with how products display themselves to the users. There is no secrecy

maintenance of the information in the organization (Sundaram, 2011). There is no independent assistance and assurance to the organization on ANSTO's control, compliance infrastructure, and control finance responsibilities. Hence it causes the issue in product behavior and product workflow.

**TASK-2**

**TIME MANAGEMENT PLAN:**

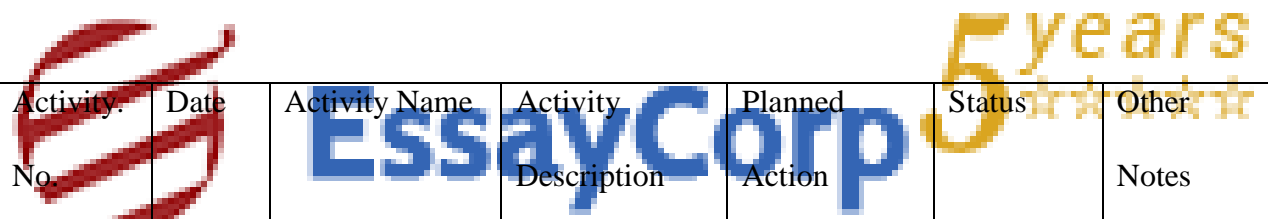
ASSESSMENT	REQUIRED ACTIVITIES
<p>Current security state of the society of the technical communication</p>	<p>The management of the nuclear science and technology initially doesn't have needed assessing security levels. ANSTO tries more for the safety of the organization. The organization mainly has culture in everything which describes the behavior and the attitude of the staffs in the organization. The security is treated as the shares responsibility. So the organization expects their staffs to be sensible of their own safety and security and also the safety of others</p>
<p>Initiating a security program</p>	<p>In establishing and maintaining the safety culture, the organization has starved the suggestions from the international Atomic Energy Agency. They follow certain rules for the safety culture.</p> <p>Reasoning Attitude:</p> <p>All research partners, contractors and employees of the organization supported to have a reasoning knowledge</p>

	<p>with respect to the safety. The supervisors and managers of the organization were expected to support this attitude among other staffs and also trained them to raise question in a constructive manner.</p> <p>Conventional decision making:</p> <p>Security should always be the number one preference in the organization. It doesn't mean that the organization will not take targeted risks for the benefits of the organization. Moreover these scopes will be successful in a safe manner for the lowest risks.</p> <p>No criticism culture:</p> <p>The organization identifies that as a human being everyone is fallible. So the company and its management system should be in a position to overcome the human errors. Any occurrence with the unexpected result is saved within the event management system. The open reporting system is highly encouraged in the organization.</p>
<p>Implementation of Information security</p>	<p>The organization takes responsibility in relation to the employee accounts in a serious manner. All teams nominate the representative for the health and security, who have well defined knowledge in regards to the health and safety of their staffs. The representatives</p>

	<p>meet their staffs regularly for their health and security matters. The establishment of the robust safety management system makes the organization to make sure that their risks are low.</p>
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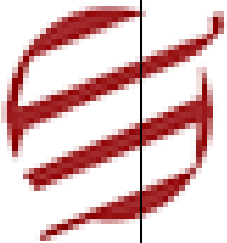
**2.1 WORK BREAKDOWN STRUCTURE:**

In this project I have developed a work breakdown structure for future project management in nuclear science and radiation and also descriptive access to the project management for OPAL research reactor (Bennett, Grave and Stopic, 2011).



Activity No.	Date	Activity Name	Activity Description	Planned Action	Status	Other Notes
1		Planning Phase	Process Requirements, Data Requirements, Conceptual Design	Describing all the elements needed for the reactor, designing the open pool reactor	completed	
2		Evaluation phase	Forming project	Determining the research	completed	

			management team, Initiating the communicative approach	facilities and LEU fuels and range of applications for the reactor		
3.		Developing Phase	Structuring process model and design, system interface design	Forming neutron factories ,providing more radio isotopes for the health treatments	completed	
4		Implementation Phase	Identifying the process management driven error and Testing	Installing the neutron beams for basic researches, Providing irradiation of target materials,	completed	Processing of quality control, Providing user manual, User support



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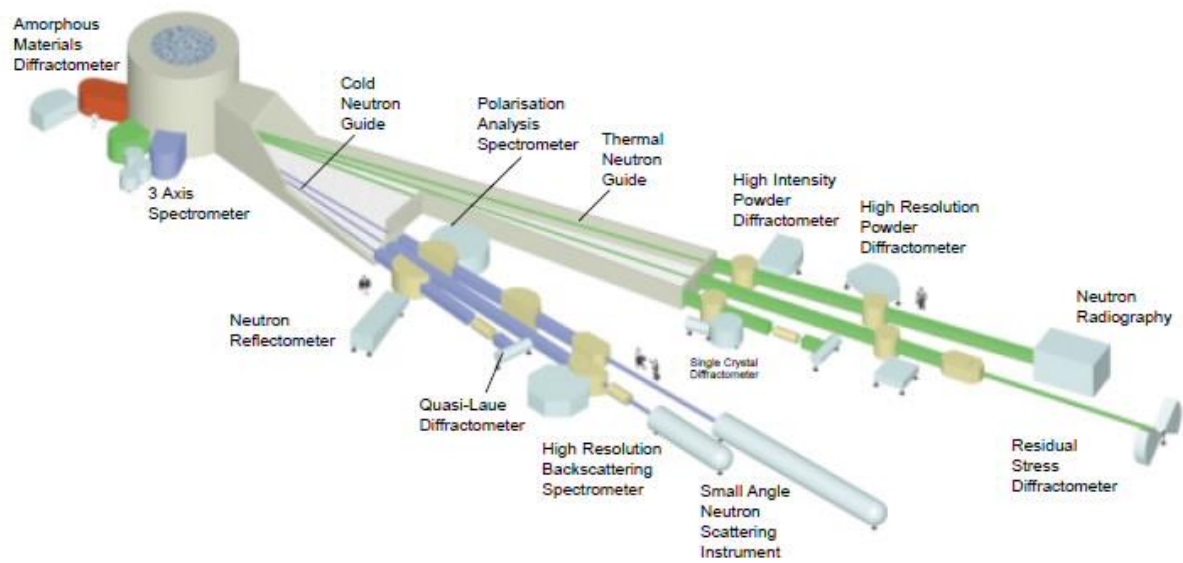
5 years ★★★★★

				implementing neutron activation techniques and neutron transmutation doping		
5.		Maintenance Phase	Scheduling maintenance work and user support	Monitoring system, Risk management	completed	

**2.2 TASK SEQUENCING APPROACH:**

The task sequencing approach used in this paper is PERT chart. It is commonly known as Program Evaluation Review technique. It is known as project management tool which is utilized to organize the needs, scheduling the tasks and coordinating the tasks within a project. In this project the project management. The PERT chart for the project management technical communication is given below.





OPAL reactor is one of the tiny reactors with the capability to offer commercial amounts of radioisotopes (Angira, 2011). They are interrelated with the open pool infrastructure. The utilization of LEU fuel and the applications makes the OPAL reactors to be the best research reactors among all others in the world (Bennett, 2008). They play a major role in the society for operating the neutron factories, providing radioisotopes for the cancer prediction and treatment. The neutron beams were offered by the OPAL reactors for the basic elements. The OPAL's functional staffs collaborate with their international colleagues in exchanging information and knowledge in a secure manner (Bennett, Grave and Stopic, 2011).

## REFERENCE:

1. Angira, R. (2011). Simulation and Optimization of an Auto-Thermal Ammonia Synthesis Reactor. *International Journal of Chemical Reactor Engineering*, 9(1).
2. Bell, D. (2006). *Science, technology and culture*. Maidenhead, England: Open University Press.
3. Bennett, J. (2008). Commissioning of NAA at the new OPAL reactor in Australia. *Journal of Radioanalytical and Nuclear Chemistry*, 278(3), pp.671-673.
4. Bennett, J., Grave, P. and Stopic, A. (2011). Establishing a basis for nuclear archaeometry in Australia using the 20 MW OPAL research reactor. *Journal of Radioanalytical and Nuclear Chemistry*, 291(1), pp.13-17.
5. Creagh, D., Otieno-Alego, V., Treasure, A., Kubik, M. and Hallam, D. (2016). The use of radiation in the study of cultural heritage artefacts. *Radiation Physics and Chemistry*.
6. Ersez, T. and Esposto, F. (2014). Radiological shielding design for the TOF polarisation analysis spectrometer Pelican at the OPAL reactor. *Progress in Nuclear Science and Technology*, 4, pp.467-470.
7. Fox, K. (2010). *Advances in materials science for environmental and nuclear technology*. Hoboken, N.J.: Wiley.
8. James, M., Nelson, A., Schulz, J., Jones, M., Studer, A. and Hathaway, P. (2005). A new neutron reflectometer at Australia's HIFAR research reactor. *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 536(1-2), pp.165-175.
9. Nuclear science. (2009). Lucas Heights, N.S.W: ANSTO.
10. Schruben, D. and Garcia, J. (2011). Tank Car Conversion to a Reactor. *International Journal of Chemical Reactor Engineering*, 9(1).
11. Sundaram, S. (2011). *Advances in materials science for environmental and nuclear technology II*. Hoboken, N.J.: Wiley.