ATOMIC ENERGY (WORKING OF THE MINES, MINERALS AND HANDLING OF PRESCRIBED SUBSTANCES) RULES, 1984

April, 1984

In exercise of the powers conferred by section 14 read with clauses (e), (g) and (1) of sub-section (2) of section 30 of the Atomic Energy Act, 1962 (33 of 1962), the Central Government hereby makes the following rules :

1. Short title, extent and commencement

(1)These rules may be called Atomic Energy (Working of the Mines, Minerals and Handling of Prescribed Substances) Rules, 1984".

(2)These rules extend to the whole of India including her territorial waters.

(3)These rules shall come into force on the date of their publication in the official gazette.

2. Definitions

In these rules, unless the context otherwise requires :

(a) "Act" means the Atomic Energy Act, 1962 (Act 33 of 1962).

(b) "adequate protection" means protection against radiation, and other physical and chemical agents, such that the operational limits of levels of radiation or contamination or concentration of radioactive as well as non-radioactive toxic substances are not exceeded.

(c) "competent authority" means any officer or authority appointed by the Central Government by notification for the purpose of these rules.

(d) "contamination" means the presence of radioactivity at any place that may be specified by the competent authority by notification for the purposes of these rules.

(e) "employee" means any person employed, including an employer who is self employed, for carrying on the mining, milling, processing, and/or handling of prescribed substances.

(f) "employer" means any person who employs or who is self-employed as the only employee.

(g) "facility" includes a device or an equipment or a place of operation.

(h) "Factories Rules" means the Factories (Atomic Energy) Rules, 1983.

(i) "handle" includes manufacture, possess, store, use, transfer by sale or otherwise, export, import, transport or dispose of.

(j) "Form" means the form annexed to these rules.

(k) "Installation" means any mine, mill, processing plant or handling facility including all necessary auxiliary facilities thereof in respect of which a licence has been issued by the Licensing Authority.

(l) “licencee” means any person who has been granted a licence for mining, milling, processing and/or handling of prescribed substances, under the Act or Rules made thereunder.

(m) “Licensing authority” means an officer or authority appointed by the Central Government by notification for the purposes of these rules.

(n) “milling” includes crushing, pulverising, sieving, processing chemically or otherwise of the ores or minerals or chemical concentrates of prescribed substances.

(o) “mine” has the same meaning as defined in the Mines Act (XXXV of 1952).

(p) “occupational hazard” means the risk in the occupation which, if not controlled, may affect the health, safety and well being of the employees.

(q) “person” includes —

(i) any individual, corporation, association of persons whether incorporated or not, partnership, estate, trust, private or public institution, group, government agency or any state or any political subdivision thereof or any political entity within the state, any foreign government or nation or any political subdivision of any such government or nation or other entity;

(ii) any legal successor, representative and agent of each of the foregoing.

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(r) “radiation monitoring” means periodic or continuous determination of the amount of radiation or contamination for the purpose of health protection.

(s) “safety officer” means any person duly qualified and employed for the purpose of carrying out duties as prescribed under these rules.

(t) “toxic gas” means any gas the inhalation of which may result in adverse health conditions.

(u) “toxic substance” means any substance the intake of which may result in adverse health conditions.

(v) words and expressions used in these rules and not defined but defined in the Act shall have the meanings respectively assigned to them in the Act.

3. Licence for mining, milling, processing and/or handling of prescribed substances

(1) No person shall mine, mill, process and/or handle any ore mineral or other material from which any one or more of the prescribed substances can be extracted, without obtaining a licence in Form B from the Licensing Authority and except in accordance with the terms and conditions of such licence:

Provided that, any person already engaged in mining, milling, processing and/or handling of prescribed substances at the time these rules came into force, shall within a period of six

months from the date of these rules coming into force, make an application in Form "A" to the Licensing Authority for the issue of the requisite licence:

Provided further that the applicant may continue the operations until the Licensing Authority takes a decision on his application and thereafter he shall abide by the decision.

4. Conditions precedent to the issue of a licence

(1) An applicant for a licence shall make a written application for the issue of a licence in the Form A.

(2) Every application shall be accompanied with a fee of rupees five hundred which will be non-refundable.

(3) Alongwith the application for licence, the applicant shall furnish the following information as may be applicable and relevant to the operation intended :-

(i) the purpose of the operation;

(ii) a description of the organisational set up;

(iii) topographic details pertaining to the operation including —

(a) a general map of the region, extending to a radius of 30 km around the site (1:63360 or any other appropriate scale) showing therein the natural features such as rivers, streams, wells, natural springs, villages, fields, etc.;

(b) a site plan in detail covering the area within the boundary of the operation (1:500 or any other appropriate scale); and

(c) a plan of the installation (1:50 or any other appropriate scale);

(iv) demographic data giving the approximate population density, general occupation of the people, etc. around the site of operation within a radius of 5 km.

(v) any available seismic date of the region;

(vi) details of location, type and nature of other industries in the region, within a radius of 5 km;

(vii) essential details of operation such as mining methods, milling and concentrating procedures (whether physical beneficiation or chemical extraction/concentration), process flow sheet, and/or handling procedures;

(viii) details of the layout of the mine/mill/ processing plant/handling facility, showing points of generation of dust, fumes, toxic gases, liquid effluents and solid wastes which contain radioactive and/or toxic substances;

(ix) details of the ventilation system-general as well as local, keeping in view rule 4(3) (iii), (iv) and (vii) above;

(x) locations of storage of prescribed substances, details of major handling equipment and nature of operations in each area of the installation;

(xi) details of methods and equipment available to contain and control the spread of surface contamination in the installation;
(xii) details of safety devices incorporated in the equipment and installation for prevention of criticality accidents, control of contamination of personnel and area and radiation exposure of personnel;

(xiii) details of protective clothing and appliances available for preventing/minimising risks of contamination and inhalation of airborne activity and toxic substances;

(xiv) details of facilities and areas set apart for decontamination operations, wherever risk of contamination exists;

(xv) details of facilities of personnel, area and environmental monitoring for assessment and control of radiation exposure and contamination/ including internal contamination of personnel under normal as well as abnormal or accident conditions;

(xvi) a complete safety evaluation of the installation including an analysis of potential accidents, measures proposed to be taken for their prevention, and measures that will be taken in the unlikely event of such accidents;

(xvii) details of methods of treatment and management of wastes from the installations to ensure that normal operational limits of discharge in respect of wastes containing prescribed substances as may be laid down from time to time are not exceeded;

(xviii) details of locations of short term/long term/ permanent storage of liquid/solid wastes, —

(a) Where disposal/retention of wastes in geological formations or man made impoundment system is envisaged, the details shall include the geological and hydrological characteristics of the proposed sites of disposal/retention. Details shall also include drawings of layout of containment system in plan, typical cross sections of all embankments and other pertinent design criteria and if applicable, details of anticipated extension. Details of embankment design shall include information on height, top walk, side slope, seepage control and protection of embankment surface from erosion;

(b) Where short term/long term storage in appropriate metallic or other containers either on surface or underground, pending final disposal, is envisaged, the details of design shall include, the type of containment vessel, stress analysis as per code requirements, dimension, proposed additions, inspection and testing, leak test and proof tests;

(c) In all cases of containment/storage, the details shall include a safety analysis of the systems, giving an evaluation of conditions that might lead to an accidental release of wastes, the probable environmental impact of such release and proposed programme of inspection and maintenance to prevent such accidental occurrence and emergency procedures which will be adopted for the protection of the employees/public in the unlikely event of accidental releases whether limited or extensive;

(xix) proformae for, —

(a) maintaining full and uptodate inventory of prescribed substances in the installation;

(b) maintaining complete records of production, consumption and loss of prescribed substances in normal operations;

(c) maintaining records of losses of prescribed substances arising out of accidents or abnormal incidents;

(xx) Any other relevant information/clarification the Licensing Authority may require.

(4) Along with the application for licence, the applicant shall undertake in writing, to —

(i) satisfy the requirements of radiation and industrial safety regarding planning, design and operation of his installation;

(ii) not to modify the installation without prior approval of the Licensing Authority except in an emergency in which case such modifications shall be communicated to the Licensing Authority immediately for his decision;

(iii) confine all the operations only to the licensed installation/s;

(iv) obtain prior permission and directions from the Licensing Authority for disposal of prescribed substances and from the Competent Authority for disposal of radioactive wastes;

(v) make available adequate staff and qualified personnel at all times to perform the normal operations safely, for dose evaluation and for management of potential accidents and in the events of abnormal occurrences, for adequate medical supervision of staff;

(vi) employ duly qualified/experienced Safety Officer and in addition for operations involving radioactivity a duly qualified/experienced Radiological Safety Officer as specified in these rules.

5. Inspection of site

The Licensing Authority or his representative/s may inspect the site of proposed operation in order to ascertain that the information furnished by the applicant is correct and complete.

6. Qualification of the staff

(1)No employer shall appoint any person as the Radiological Safety Officer, unless he possesses the following qualifications and experience;

(i) a basic degree in Physics from a recognised University;

(ii) a postgraduate diploma/degree in radiological physics from a recognised institution;

(iii) an experience of 5 years of discharging under a certified Radiological Safety Officer the duties and functions outlined in Rule 8;

(iv) a certificate from the Competent Authority as Radiological Safety Officer;

(2) No employer shall appoint any person as the Safety Officer unless he possesses the following qualifications and experience :-

(i) a degree in any branch of engineering or technology, and practical experience of working in any mine in a supervisory capacity for a period of not less than 2 years; or a degree in physics or chemistry or a diploma in any branch of engineering or technology with a practical experience of working in any mine in supervisory capacity for a period of not less than 5 years; and

(ii) a diploma in industrial safety.

7. Duties and responsibilities of the licensee

(a) A licensee shall not employ any person under the age of 18 years in an installation:

(b) He shall ensure that the operation of the installation is carried out strictly in accordance with the terms and conditions of the licence:

(c) He shall ensure that the general requirements of radiation and industrial safety are complied with;

(d) He shall not modify the installation/process/flow sheet without prior approval from the Licensing Authority;

(e) He shall confine his operations only to the licensed installation;

(f) He shall provide adequate staff at all time in order to ensure safety of normal operations, for dose evaluation, for management of accidents, if any, and for medical care and attention of the employees;

(g) He shall ensure that adequate protection is provided at all time to safeguard the health and safety of the employees;

(h) He shall ensure that regular radiation monitoring of the installation as well as of radiation workers is carried out and their records maintained;

(i) He shall ensure that adequate precautions are taken to prevent environmental pollution due to the operation of the installation, beyond permissible limits as may be specified by the Licensing Authority from time to time;

(j) He shall arrange for pre-employment and post-termination/retirement medical examination of all employees. The pre-employment medical examination in the case of radiation workers and workers in mine shall include a comprehensive documentation of the respective employee's medical history, history of previous employment, radiation exposure and chronic exposure to any specific environment such as silica dust. A person shall be employed only after such pre-employment medical examination and after being found fit for the employment. He shall arrange for annual medical examination of such workers during their service which shall include chest X-ray at least once in five years, general laboratory investigations such as examination of blood and excreta, and special investigation such as examination of skin, hands, fingers, finger nails, ears and eyes.

(k) He shall maintain complete and uptodate records of personal, medical and occupational histories of radiation workers and workers in mines in such form as may be prescribed by the Competent Authority.

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(l) He shall send relevant excerpts from the records maintained by him, on demand, to the Licensing Authority in a form as may be specified by the Licensing Authority.
(m) He shall ensure that all employees are properly instructed as to the hazards involved in their work and the precautions to be taken by them for their safety and the safety of their fellow workers. He shall prepare necessary operating instructions for each unit.

(n) He shall in consultation with the Safety Officer and the Radiological Safety Officer chalk out an emergency plan which will lay down instructions for the guidance of the employees in the event of emergency and/or accident conditions and shall get the plan approved by the Competent Authority. He shall conduct periodic training and drills to ensure that all employees are familiar with the emergency plan. The emergency plan and the result of the drills shall be reviewed from time to time.

(o) He shall obtain reports on unusual occurrences and accidents from the radiological safety officer and the safety officer and send them to the Licensing Authority and the Competent Authority in Form C appended to these rules.

(p) He shall notify any theft or loss of prescribed substances from his custody to the Licensing Authority as soon as the loss is discovered.

(q) He shall employ a qualified Safety Officer and a Radiological Safety Officer and be guided by them in all matters of industrial and radiological safety of the staff and the installation. He shall provide them with staff and facilities to carry out their duties effectively. The safety officer and radiological safety officer may be one and the same person, if he possesses the required qualifications to carry out the duties of both the posts.

(r) He shall provide the facility of periodic inspection of the installation to the Licensing Authority or his representatives.

8. Duties and responsibilities of the Radiological Safety Officer

The Radiological Safety Officer shall advise the employer on all matters connected with radiological safety of the employees, and the public residing in the vicinity of the installation, and in doing so he shall be guided, in general, by the provisions of the Radiation Protection Rules, 1971.

9. Duties and responsibilities of the Safety Officer

(a) The Safety Officer shall advise the employer on all matters connected with industrial safety and industrial hygiene.

(b) He shall periodically inspect the places of work to ensure that the equipment are adequate and in good working order and that safe procedures are adopted by the employees during work. He shall ensure that unsafe conditions do not prevail in the places of work.

(c) He shall periodically inspect personal protective equipment (like hand gloves, helmets, goggles etc.) to ensure that they are fit for use.

(d) He shall periodically inspect emergency safety kits and ensure that they are fit for use in an emergency.

(e) He shall investigate all accidents, near accidents including those in which no person is involved, and recommend to the employer, measures of preventing recurrence of such accidents.

(f) He shall collect accident statistics and analyse them according to standard procedures, for reviewing the safety status of the installation.

(g) He shall conduct periodic ventilation survey in the installation to ensure that the ventilation is satisfactory.

(h) He shall carry out noise level survey, illumination survey, survey for airborne toxic substances and any other survey relating to industrial hygiene and ensure that the employees work in a safe atmosphere.

(i) He shall ensure that the provisions of Factories (Atomic Energy) Rules, 1983 are complied with.

10. Compensation

If any employee suffers an injury, disease or disablement arising out of the mining, milling, processing or handling of prescribed substances, the employer shall be liable for the payment of compensation in accordance with and to the extent of the provisions of the Workmen's Compensation Act, 1976 (No.65 of 76).

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11. Restriction on disclosure of information

No person shall without the permission in writing of the Licensing authority or an officer authorised by the Licensing Authority communicate to any person orally or by means of any document, drawing, photograph, plan, model or otherwise any information whatsoever, that discloses, describes, represents or illustrate the mining/milling/ processing and/or handling of prescribed substances.

12. Suspension/Cancellation

If in the opinion of the Licensing authority, a licensee fails or neglects to comply with the provisions of these rules and the terms and and conditions of the licence, the Licensing Authority may, after issuing to the licensee a notice in writing requiring him to show cause why his license may not be suspended/or cancelled and after considering the representation, if any of the licensee, and after recording reasons may suspend or cancel the licence. Such suspension or cancellation shall be without prejudice to any other action that may be taken, against the licensee under the provisions of the Act or rules framed thereunder.

13. Appeals

(1) An appeal shall lie against any order of suspension or cancellation of a licence by the Licensing Authority to the Central Government.

(2) Every appeal shall be in writing and shall be accompanied by a copy of the order appealed against and shall be presented within thirty days of the communication of the said order.

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FORM A

Government of India
Department of Atomic Energy

Application for licence for mining & milling of minerals containing prescribed substances and for handling such substances

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1.* Name of the applicant :

2. Address of the applicant :

3. Installation for which licence is being applied for :

4. Name and designation of the Head of the Installation :

5. Names of the individuals who are entrusted with administration of radiation protection and industrial safety at the installation :

6. Proposed date of starting the operations :

7. Are the workers provided with facilities of :

   i) External Monitoring
   ii) Internal Dosimetry
   iii) Industrial hygiene

and safety and

iv) Medical surveillance

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* Complete address of the applicant and the installation with Telephone numbers (during and outside office hours), telegraphic address and telex numbers, if any, may please be furnished in the space provided below :-

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8. Give details of the qualifications, training and experience, if any, of the persons in charge of the operation involving prescribed substances (Use additional sheet if necessary).

Department	Name of the of person in-charge	Academic qualifications	Type of training or experience	When and where the training and experience were gained	Duration of training and experience	Maximum amount of prescribed substances handled so far
1	2	3	4	5	6	7

9. (A) Particulars of operations for which this application is made (add extra pages, if necessary)

Sr. No.	Type of operations involving prescr-ibed substances	Estimated reserves of pres-cribed substances (in case of mining operations)	Physical and Chemical form of the initial material	Physical and Chemical form of end product	Concen-tration of prescribed substance in the feed material	Percentage recovery of prescribed substance	Annual Production/ quantity handled per year	Purpose for which prescribed substance is to be recovered
1	2	3	4	5	6	7	8	9

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9. (B) Particulars of tailings and effluents generated (add extra pages, if necessary)

Estimate of tailings produced annually	Method of treatment of the tailings	Method and location of final disposal of the tailings	Estimate of volume of effluents produced annually (describe effluents)	Method of treatment of the effluents	Method and location of final disposal of effluents	Monitoring systems provided in the pathways of	
						Tailings	Effluents
1	2	3	4	5	6	7	8

10. Details of staff available in various departments including the safety and medical departments :-

STAFF STRENGTH

Department	Technical	Skilled	Unskilled

11. (A) If operations are to be carried out in a plant, please indicate as appropriate-

i) The Plant is yet to be built

ii) Plant is already built and equipped

iii) Existing plant is to be modified as per details enclosed

(B) If mining operations are to be carried out - please indicate type of mining Opencast/ Underground

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* 12. Relevant background information pertaining to the current operations (when existing operations are to be regularised by this application)

* 13. Detailed information relating to proposed operations (new applicants):-

a) Information on operation sites, their environment and other relevant details.

b) Details of procedures and processes that will be used for mining, milling and/or for handling the minerals and materials containing the prescribed substances.

c) Details of safety and monitoring equipment provided in the installation (furnish details and technical specifications including those of portable instruments).

d) Information regarding transport of prescribed substances from one site of operation to another site :-

i) Container details

ii) Mode of transport

e) Details of assessment of radiation and other health hazard to the local population during normal operations and methods for monitoring and controlling such hazards.

f)Brief assessment of maximum credible hazard to local population in the event of an accident and proposed remedial action.

* 14. List of equipment (along with their specifications) available with the associated laboratories where the prescribed substances will be handled. (Please give details of equipment under each category).

A) Handling Equipment : (e.g. remote control tongs, pipettes, etc.)
B) Protection Devices : (i.e. lead bricks, rubber gloves, respirators etc.)
C) Laboratory Accessories : (e.g. stainless steel trays/ sinks, foot operated waste bins, fume hoods, gloved boxes, etc.)
D) Radiation Detection/Measurement Equipment : (e.g. area survey meters, contamination monitors, air samplers, counters, etc.)
E) Details of storage facilities provided for the prescribed substances.
F) Details of ventilation facilities incorporated in the installation.

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* Kindly furnish details on a separate sheet, if necessary.

15.Proposed procedures for treatment and disposal of radioactive and other hazardous wastes (solid, liquid and gases).

16. Radiation safety measures which will be taken at the time of termination of work :-
    i) Proposed date of completion of work.
    ii) Steps that will be taken to restore normal conditions at site, on termination of operations.

17. Please enclose :
    i) TOPOGRAPHICAL MAP of the area
    (1:63360 scale) extending to a radius of 30 Km all around the site, showing the natural features, nature of habitation and land utilisation in the area.
    ii) A SITE PLAN of the installation (1:500 scale)
    iii) ARCHITECTURAL BLUEPRINTS (1:50 scale) showing the layout of equipment and processes in the individual buildings.

18. Any additional relevant information which the applicant may like to furnish in support of his application.

19. I hereby certify that,
    (a) all the statements made above are correct to the best of my knowledge and belief.
    (b) no operations will be carried out for purposes other than those specified under item 9 of this form.
    (c) prescribed substances will not be moved from the authorised place without prior approval of the Licensing Authority.
    (d) prescribed substances will be transported only in accordance with the relevant safety regulations.
    (e) full facilities will be accorded by us to any authorised representative of the Competent Authority or the Licensing Authority to inspect the installations at any time.
    (f) radiation surveillance and medical surveillance of all persons engaged in radiation work, as required by the Competent Authority will be duly carried out.
    (g) the prescribed substances will not be sold, rented or transferred to any other person, without prior approval of the Competent Authority and the Licensing Authority.

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(h) all recommendations that may be made from time to time by the Competent Authority in respect of radiation safety measures will be duly implemented.
(i) duly qualified/experienced Safety Officer/Radiological Safety Officer will be appointed before the commencement of the operations.
(j) any changes in the personnel listed in this application will be intimated forthwith to the Licensing Authority.

Date : _____

_____
Signature of the applicant
Institution & Seal

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FORM B

Government of India
Department of Atomic Energy

Licence for Mining & Milling of Minerals containing Prescribed Substances and for Handling such Substances

Mr./Messrs _____
of

_____

_____

_____

having undertaken to comply with the conditions prescribed in the Working of the Mines, Minerals and Handling of Prescribed Substances Rules, 1983, and any orders issued thereunder and having paid the prescribed licence fee is/are hereby authorised for mining/milling/handling of prescribed substances as described in the application for licence.

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This licence is issued on _____ and shall be valid upto _____ subject to the conditions printed overleaf.

Licensing Authority
(Seal of Office)

CONDITIONS OF LICENCE

1. This licence may be suspended or cancelled, if any declaration made or information given in the application therefor is found to be false or if any undertaking given in such application is not carried out.
2. No operations shall be carried out for purposes other than those specified under item 9 of the application form.
3. Prescribed substances will not be moved from the authorised installation without prior approval of the Licensing Authority.
4. Prescribed substances shall be transported only in accordance with the relevant safety regulations.
5. Full facilities shall be accorded to any authorised representative of the Licensing Authority to inspect the installation at any time.
6. The prescribed substances shall not be sold, rented or transferred to any other person, without prior approval of the Licensing Authority.
7. Duly qualified/experienced Safety Officer and Radiological Safety Officer shall be appointed before the commencement of the operations.
8. Any changes in the personnel listed in this application shall be intimated forthwith to the Licensing Authority.
9. No modifications in the installation shall be made without prior approval of the Licensing Authority.
10. Medical and radiation surveillance shall be provided for the employees.
11. The Radiological Safety Officer and the Safety Officer shall be provided with requisite facilities to discharge their duties and functions.
12.Information on unusual incidents and accidents shall be sent to the Licensing Authority forthwith.
13.Appropriate records of operations, inventory of prescribed substances and of routine surveillance and disposal of wastes shall be maintained.
14.Information pertaining to operations of mining, milling or otherwise handling of prescribed substances shall not be transferred to any unauthorised person.
15.The technical specifications and the operating conditions as described in the application, shall be maintained under all normal conditions.
16.The conditions attached to this licence as attachments No.1 to No.____ shall be binding on the licensee.
17. A licence shall be valid for a period of three years from the date of issue of the licence.

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FORM C

Government of India
Department of Atomic Energy

Format for Reporting to the Licensing Authority/Competent Authority Unusual Occurrences and Accidents

1. Name and address of the Installation :
2. Site of unusual occurrence :
3. Type of radiation installation :
4. Date & time of occurrence :
5. Date & time of receiving information (by RSO/SO) :
6. Date(s) of visit of RSO/SO to the site of occurrence :
7. Detailed account of the nature of occurrence, equipment involved and extent of hazard :
8. Action taken on site & result :
9. Maximum radiation and contamination levels found in the area involved :
10. Names of the individuals involved and the details of exposures/contamination received by them (including the officers investigating the occurrence and attending to the incident)

Name of the person	(Annual) cummulative dose before the incident	Cummulative dose after the incident

Signature of Radiological Safety Officer /Safety Officer

Signature of Employer
(Name of Employer)

(Name of RSO/SO)

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11. Details of immediate medical aid and treatment provided :

12. If the accident involved any disabling injuries,give the names of such individuals :

13. Comments and recommendations tions by the investigating officers on the unusual occurrence :

14. If potential hazards to the public, plant or environment are involved, state what steps are recommended to avoid such hazards and to prevent recurrence in future :

15. General observations :

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Signature of Radiological Safety Officer / Safety Officer

(Name of RSO/SO)

Signature of Employer
(Name of Employer)

Seal of Office