



Petroleum and Explosives Safety Organisation

Annual Report [2011-12]

*O/o Chief Controller of Explosives,
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Website: <http://peso.gov.in>

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INTRODUCTION

The Petroleum and Explosives Safety Organisation (Formerly Department of Explosives) since its inception on 9/9/1898, has been serving the Nation as the nodal agency regulating safety of hazardous substances namely explosives, compressed gases and petroleum. The Organisation has earned rare distinction as an institution of excellence in matters relating to safety in manufacture/refining, storage, transportation, handling etc of hazardous substances for over a century. Apart from the normal functions of enforcement of statutory safety regulations to safeguard Public safety, life, property and environment, the Organisation has rendered meritorious voluntary services in examination and disposal of explosives, improvised explosives devices till late eighties of the last century, some of which were of national importance encountered during freedom struggle of the country, terrorist activities in different regions in the country. Till early nineties of the last century, the officers of the Organisation were carrying out anti-sabotage checks and duties related to VVIP security, Airport Security etc. The Organisation has creditably rendered training to Police, Security and Intelligence personnel in detection, examination and disposal of explosives/explosive devices, as there was no other agency to impart such training in the country. The activities of the Organisation, over the years has increased exponentially and expanded in diverse fields. Today the Organisation deals with wide range of subjects relating to Explosives, Petroleum, Compressed Gases, Pressure Vessels, Gas Cylinders, Pipelines, LNG, CNG, Auto LPG etc.

The Organisation, although small in size, compared to many other Government organizations, with an existing strength of only 94 officers, is the only Organisation of its kind directly overseeing the safety requirements for over 2.24 lakhs hazardous units and offering expert technical and safety guidance to numerous industries and user companies, including Ministries of Defence, Railways, Shipping, Surface Transport, Environment & Forests, Civil Aviation and establishments of Atomic Energy and Space Research.

Initially, the activities of the Organisation were confined to enforcement of Explosives Act (4 of 1884) involving inspection of few explosives storage magazines and investigation of accidents related to storage and transportation of explosives. Subsequently, enforcement of Petroleum Act (8 of 1899) & Petroleum Rules which came into force on 17.02.1899 and Carbide of Calcium Rules framed under this Act notified on 11/08/1899, were also entrusted to

this Organisation. However, owing to different sets of provincial Regulations prevailing in different provinces at that time, an impasse was created in effective administration of the Petroleum Act and Rules.

With a view to thrash out the impasse and bring uniformity in the system, the Chief Inspector of Explosives started an endeavour to frame a set of Rules for all states allowing variations essential for local conditions. Finally, the Petroleum Act, 1934 was promulgated in supersession of all earlier Regulations and the Petroleum Rules, 1937 came into force with effect from 30.03.1937 replacing the earlier Central and Provincial Rules. The consolidated Carbide of Calcium Rules came into force with effect from 18.03.1937. After Independence, though hazardous but useful materials like explosives, petroleum etc. found place in the Union List of the Constitution of India. Subsequently, the Petroleum Rules, 1937 were overhauled comprehensively and replaced by Petroleum Rules, 1976. The Petroleum Rules, 1976 were further reviewed and overhauled in view of changed scenario and also report of the Rajya Sabha Committee for Sub-ordinate Legislation and new rules Petroleum Rules, 2002 were brought into force with effect from 13/03/2002. Amendment was done on 02/02/2007 and 15/06/2011.

During the course of time, similarly there were several revisions and amendments in the Explosives Act and Rules. The earlier Explosives Rules, 1918 were replaced by Explosives Rules, 1940, which were again overhauled and replaced by the Explosives Rules, 1983, which have been again thoroughly reviewed and present Explosives Rules, 2008 have been brought in force since 29/12/2008.

Inflammable Substance Act, 1952 came into force from 1952. The Gas Cylinder Rules which were originally framed in the year 1940, were replaced by new comprehensive Gas Cylinder Rules, 1981. These Rules were again reviewed due to liberalized policy of Government of India and were replaced by new Gas Cylinder Rules, 2004 with effect from 21/08/2004.

The Static and Mobile Pressure Vessels (Unfired) Rules, 1981 were for the first time brought in force in the country to cover safety in storage and transportation of bulk compressed gases in unfired pressure vessels. These rules have been appropriately amended from time to time to cover new fields like cryogenic liquids, Auto LPG Dispensing Stations etc.

Due to the complexity of functions and increased responsibility in implementing safety regulations over the entire length and breadth of the country, the Organisation has modernized its working procedures making use of latest tools of information technology. Consequently, all the offices of the Organisation have been networked through the central server installed at Nagpur, the data base of the Organisation has been digitized and access to the data has been made available to the public through the net. The members of the public can now have access to the status of their applications by visiting the Organisation's website. The aim of the Organisation is to take benefit of modern work procedures, technology and upgraded manpower quality by imparting continuous training to officers and staff for turning itself into an Institute of Excellence. The reputation earned by this Organisation over the century is reflected by confidence shown by all related Industries, various Government Departments/Organisations and Autonomous Bodies in seeking advice and guidance in the matters relating to handling of hazardous substances.

Aided by its most efficient technical work force, congenial working conditions, proactive approach, up-gradation of knowledge base, deployment of IT techniques and over all traditional dedication to serve the cause of safety, the Organisation is now poised to scale new heights of excellence in the years to come.

T.R. THOMAS
Chief Controller of Explosives

ROLE AND FUNCTIONS OF THE ORGANIZATION

With an overall objective of ensuring safety and security of public and property from fire and explosion, the Organization as a statutory authority is entrusted with the responsibilities under of Explosives Act, 1884, Petroleum Act, 1934; Inflammable Substances Act, 1952 and the following Rules framed under these Acts;

2.1: STATUTORY ROLE

EXPLOSIVES ACT, 1884:

1. Explosives Rules, 2008
2. Gas Cylinder Rules, 2004
3. Static & Mobile Pressure Vessels (Unfired) Rules, 1981
4. Notification No. GSR 625(E) dated 07.08.1983 regarding Acetylene Generator

PETROLEUM ACT, 1934:

1. Petroleum Rules, 2002
2. Calcium Carbide Rules, 1987
3. Cinematography Film Rules, 1948

The activities of the Organization involving administration of the Acts and Rules noted above are described below in brief: -

2.1.1: EXPLOSIVES RULES, 2008:

The major work under Explosives Rules, 2008 relates to grant of approval and licences for manufacture of explosives, authorization of explosives, storage of explosives, import/export of explosives, transport of explosives by road and packaging for explosives etc. prescribing safe procedures and methods for manufacture of various types of explosives including the tools, equipments and machineries. The Organization carries out investigation of accidents involving explosives and also undertakes destruction of unserviceable/seized explosives in the interest of public safety and security.

The Organization carries out inspection and safety audit of the new premises for verification/endorsement at the time of grant of licenses/approvals and also periodic inspections of the licensed/approved premises.

2.1.2 : GAS CYLINDER RULES, 2004:

The Gas Cylinders Rules were first published in 1940 after Govt. of India Notification No. M-1272 (1), dated 28th September 1938 declaring 'any gas when contained in any metal container in a compressed or liquefied state' to be an explosive within the meaning of Explosives Act, 1884. The above rules were later replaced by the Gas Cylinders Rules, 1981, after a comprehensive review in the light of the development of the gas industry after independence. Eighties & Nineties witnessed massive expansion in the gas and related industries triggered by economical liberalization and globalization, use of LPG as industrial and domestic fuel, introduction of CNG and LPG as environment friendly automotive fuels, entry of new technologies, etc. necessitate another round of review and bringing out the new Gas Cylinders Rules, 2004.

The major activities covered under these Rules include grant of approval for cylinder manufacturing units, its valves & LPG regulators etc, as well as approval of designs of these equipments; licensing of gas cylinder filling plants, CNG fueling stations, cylinders storage premises and import of cylinders/valves; grant of permission for filling of cylinders; recognition of cylinder testing stations etc. This Organization also plays a crucial role in the formulation of standards for cylinders, valves, regulators, etc. The Organization regularly undertakes safety audits of gas cylinder; filling plants; CNG fueling stations, cylinder, valve and regulator manufacturing units, etc. approved/licensed premises under the aforesaid Rules to ensure the compliance of the Rules and also to inculcate safety awareness.

Salient features of Gas Cylinders Rules, 2004 with respect to deregulation and simplification of Rules-

- a) Enhancement of the scope of the Gas Cylinders Rules to cover special containers up to 2500 liters water capacity and composite cylinders made of non-metallic materials.
- b) Enhancement of the exemption limit of possession of gas filled cylinders without licence and periods for which a licence can be granted and renewed.
- c) Doing away the requirement of prior approval of specification and plans for setting up of cylinder filling plants, conversion of cylinders from one gas service to another & filling of cylinders between the hours of sunset to sunrise in respect of non-toxic non-flammable gases.
- d) Simplification of the procedure for transfer of a licence in case of change of ownership or death of the licensee.

2.1.3: STATIC & MOBILE PRESSURE VESSELS (UNFIRED) RULES, 1981:

The functions of the Organization relating to administration of these Rules covers grant of approval for fabrication shops of pressure vessels/fittings and their designs, licenses for storage of compressed gas installations and for transport of compressed gas in vessels by road, permission for import of vessels, grant of recognition of inspecting agencies/competent persons to carry out inspection and certification during manufacture/repair of vessels and final testing as well as periodic testing thereof.

The Organization carries out inspection and safety audit of the new premises for verification /endorsement at the time of grant of licenses/approvals and also periodic inspections thereafter of the licensed/approved premises. The above functions also include review of safety audits, periodic tests inspection reports and performance of vessel fabricators and certifying agencies.

2.1.4 : NOTIFICATION NO. GSR.625 (E) DATED 07/08/1983 REGARDING ACETYLENE GENERATOR:

Acetylene when liquid or subjected to pressure or in admixture with air or oxygen is highly explosives. The generation of acetylene and approval of such generators is governed under this notification. The Organization grants the approval of type of acetylene generators and to acetylene plants. Trial runs of the generator both at the manufacturer's place and at the factory where the generator is installed for evaluating its performance as well as determining efficiency of each generator at the time of endorsement of licenses is done by the Organization besides routine inspections of acetylene cylinder filling plants in operation.

2.1.5 : PETROLEUM RULES, 2002:

Petroleum has been defined under the Act and Rules as liquid hydrocarbon or a mixture of liquid hydrocarbons and any inflammable mixture containing liquid hydrocarbons. The work relating to administration of these Rules covers approval of Refineries, Petrochemicals/Oil & Gas Processing Plants, transport of petroleum by land and pipeline, Flameproof other suitably protected electrical apparatus and other safety equipments for use in areas laden with flammable gases and vapours, licensing of Petroleum dispensing/service station, Petroleum storage installations, Tank trucks for transportation by road, aircraft

refueller and also issuance of Certificate of Gas Free in respect of Vessels/Ships carrying petroleum for dock entry, man entry or hot work.

The Organization carries out safety audits of these premises to ensure compliance of Rules and safety measures.

2.1.6 : CALCIUM CARBIDE RULES, 1987:

Calcium Carbide has been declared as inflammable substance under the Inflammable Substances Act and the safety provisions of Petroleum Act has been made applicable to it. Calcium Carbide in contact with moisture generates acetylene gas, which has wider range of explosives limits. Approval of receptacles for packing Calcium Carbide and licensing for storage of calcium carbide either for sale or for generation of acetylene are the functions entrusted to the Organization under these rules.

2.1.7: CINEMATOGRAPHY FILM RULES, 1948:

Storage and transport of Cinematographic Films having Nitrocellulose base, pose potential mass fire hazard. The storage and transport of such films are governed under these Rules and licensing of storage premises is done by this Organization. The Nitrocellulose based films are replaced by safety films (Polyester Based) since times. These rules have therefore become redundant and recommended for its deletion.

2.2: ADVISORY ROLE:

With the expertise in specialized technical and safety aspects to prevent fire and explosions of Explosives, Petroleum, Carbide of Calcium, Gas Cylinders, Pressure Vessels and other hazardous substances, the Organization renders advice whenever requested, not only to the industry but also to the Government and Semi-Government bodies like Ports, Railways, Defense Establishments, and Ministries of Surface Transport, Environment & Forests, Petroleum & Natural Gas, Pollution Control Authorities etc. The Organization plays important role in formulation of related BIS standards, Port by-laws, Indian Red Tariff and regulations pertaining to transportation of hazardous goods by rail, road, sea and air.

The Chief Controller of Explosives is the member of the Central Crisis Group constituted by the Ministry of Environment & Forests and other officers also represent in State level and District level Crisis Management Groups.

ACTIVITIES OF THE ORGANIZATION IN BRIEF

3.1: Scrutiny and appraisal of site, layout and construction plans for;

- Explosives manufacturing factories
- Explosives storage premises
- Fireworks manufacturing factories
- Fireworks store houses and shops
- Manufacture of Explosives at site in Bulk Mixing and Delivery [BMD] Vehicles.
- Gas Cylinder filling plants
- CNG Dispensing stations
- Storage sheds for filled gas cylinders
- Bulk Storage installations for compressed gases in pressure vessels
- Auto LPG dispensing stations
- Petroleum storage installations
- Petroleum storage sheds
- Petroleum tank lorries
- Petroleum cross-country pipelines.
- Petroleum service stations.
- Calcium carbide storage premises.

3.2: Scrutiny and appraisal of proposals for approval of design and construction of Explosives vans, Bulk mixing and Delivery vehicle for site manufacture of explosives, vehicles for transport of bulk compressed gases/cryogenic liquids in pressure vessels and Petroleum containers and Tank Lorries including its safety fittings.

3.3: Licensing of the premises/units/vehicles referred to under 3.1 & 3.2 above.

3.4: Scrutiny and appraisal of layout etc. of Petroleum Refineries, Petrochemical units, Calcium Carbide factories and Acetylene Gas generating plants for grant of approval thereof.

3.5: Scrutiny and appraisal of proposals of design, construction, laying and operation of Pipeline for transport of liquid hydrocarbons as well as other flammable gases/hazardous chemicals grant of approval thereof.

3.6: Scrutiny and appraisal of proposals of designs of Pressure Vessels and their fittings both manufactured in India and imported for grant of approval thereof.

3.7: Scrutiny and appraisal of proposals of design of Gas Cylinders and valves fitted there to manufactured in India and imported for grant of approval thereof including LPG cylinder Regulator.

3.8: Scrutiny and appraisal of proposals of flameproof, intrinsically safe and special electrical equipments suitable for use in hazardous areas laden with flammable gases/vapors, both manufactured indigenously and also imported for grant of approval thereof.

3.9: Scrutiny and appraisal of proposals of factories fabricating pressure vessels and its fittings for grant of approval thereof.

3.10: Scrutiny and appraisal of proposals of testing stations for periodic examination and testing of cylinders for grant of recognition to the cylinder testing station.

3.11: Recognition of competent persons and inspectors under various Rules.

3.12: Issue of shot firer's permit & foreman's certificate.

3.13: Regular safety audit of the units mentioned above.

3.14: Destruction of deteriorated and unclaimed/unserviceable/seized explosives.

3.15: Examination of petroleum tanks in sea going vessels/ships for issuing gas free certificates for allowing hot work, entry of man in such tanks and entry of such vessels in docks.

3.16: Technical investigation of accidents related to the substances coming under the purview of the Acts and Rules administered by the Organization for ascertaining causes of accident and violations.

3.17: Scrutiny and appraisal of proposals to import, export and transport explosives for grant of licence thereof.

3.18: Authorization of new explosives after adequate tests and trials.

3.19: Grant of permission for filling/use of gas cylinders imported from abroad and manufactured in India.

3.20: Grant of licence/permit for import of cylinders & pressure vessels.

3.21: Scrutiny of periodic returns under various Rules.

3.22: Review & Amendment of Rules and grant of exemption/relaxation wherever necessary in Public interest.

3.23: Advising on their request to port, Airport and Railway authorities on -

- Classification of hazardous substances;

- Packing and determination of conditions for storage/transport of dangerous substances;
- Siting and layout of facilities for the loading/unloading and transit storage of explosives, flammable and other dangerous substances.

3.24: Examination/testing of explosives/hazardous substances for classification of hazard.

3.25: Advising the Central and State Governments, the Industry and various Organizations on matters relating to the handling of explosives, flammable and other dangerous substances, and the requirements of the Acts and Rules referred to above whenever asked.

3.26: Participation as Chairman or member in various committees appointed by the Ministry of Defence, Bureau of Indian Standards and other Ministries and Departments.

3.27: Participation in symposiums, seminars, workshops organized by various Organizations relating to safety in handling of hazardous chemicals, petroleum products, explosives and compressed gases.

ADMINISTRATION, BUDGET AND INFRASTRUCTURE

4.1: STRENGTH AND INFRASTRUCTURE:

The sanctioned strength of the Organization at present is **137 Group 'A' officers and 343 Group 'B', 'C' and 'D' officials**. Out of the above, **41** posts of Group 'A' and **25** Group 'B', 'C' & 'D' officials are lying vacant due to various administrative procedures and reasons. The Petroleum and Explosives Safety Organization (PESO) is **headed by the Chief Controller of Explosives** with its **headquarters at Nagpur** and there are **5 circle offices** headed by the Jt Chief Controller of Explosives located at **Mumbai, Chennai, Kolkata, Faridabad and Agra**. The Organization has **13 Sub-Circle Offices** headed by the Dy. Chief Controller of Explosives and **5 sub-circle offices** are headed by the Controller of Explosives. The Departmental Testing Station (DTS) situated at Gonkhairi, Nagpur is headed by Dy. Chief Controller of Explosives and Fireworks Research And Development Centre (FRDC) situated at Sivakasi headed Controller of Explosives (for details please refer to Annexure-I)

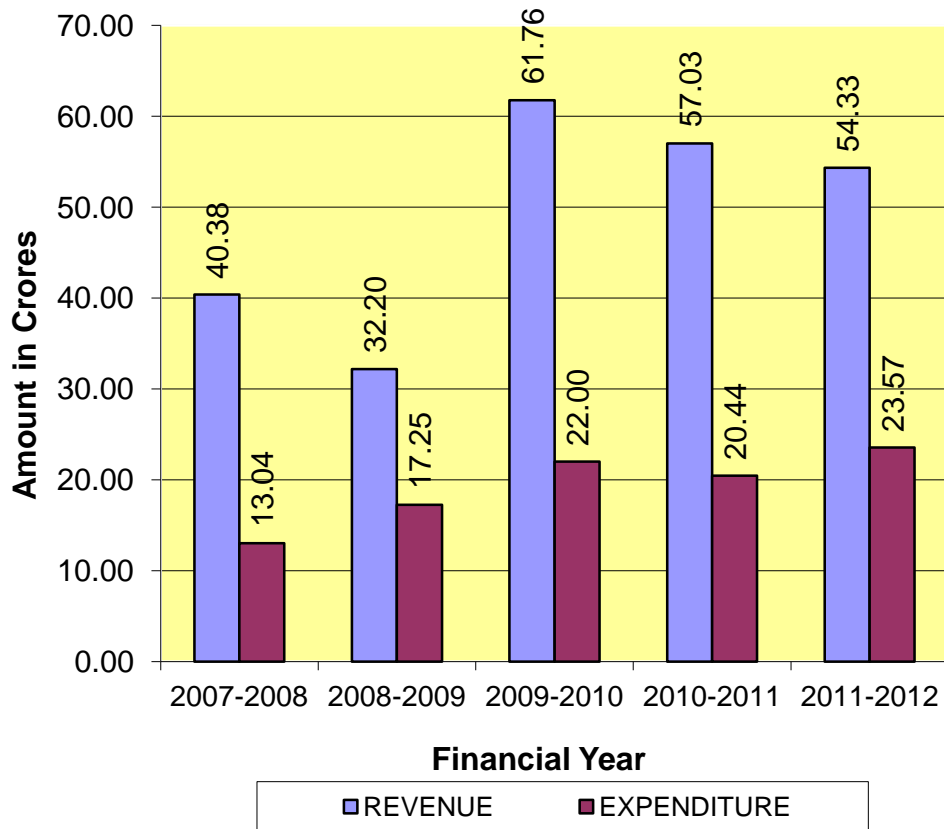
4.2: BUDGET & EXPENDITURE:

During the year, budget granted for Organization under non-plan budget was Rs. 23,75,00,000/- and under plan budget was Rs.2,97,00,000/-. During the year, expenditure under non-plan budget was Rs.23,57,54,697/- and under plan budget was Rs.2,69,14,781/-

4.3 : REVENUE:

During the year, the Organization earned revenue of Rs.54,33,27,257/- on account of fees for the services rendered which includes Rs.32,96,81,019/- under Explosives Act and Rs.21,36,46,238/- under Petroleum Act.

REVENUE & EXPENDITURE (Non-Plan)



DEPARTMENTAL TESTING STATION & FIREWORKS RESEARCH AND DEVELOPMENT CENTRE

INTRODUCTION:

The Departmental Testing Station is situated at 18 KM Stone, Nagpur – Amravati Road, N.H. No. 6, Village Gondkhairy, District Nagpur and is spread over 81 acres of land. The Testing Station functions under the overall guidance and control of Chief Controller of Explosives, Nagpur.

The basic aim behind development of Organization 's own Testing Station is to carry out necessary statutory tests to assist Chief Controller of Explosives in administration of Explosives Act, 1884 & Petroleum Act, 1934 and rules framed there under. The Testing Station also renders services of quality control & other tests for different materials and equipments to the user industries especially manufacturers of explosives, which also includes UN Classification Tests which is first of its kind in India for facilitating export of explosives and its accessories.

FUNCTIONS:

A. STATUTORY TESTS:

Sl. No.	Rules	Purpose of Test
1.	Explosives Rules, 2008	Authorization of new compositions and specification of Explosives. Subsequent annual test for deciding about deletion or otherwise from list of authorized explosives. Approval of Packages of Explosives.
2.	Petroleum Rules, 2002	Approval of design of Safety Fittings of Tank Lorries. Subsequent test for deciding revalidation of manufacturing approval. Approval of Metal Container of petroleum.
3.	Gas Cylinder Rules, 2004	Statutory Test facilities available for LPG and Compressed Gas Cylinder testing as per relevant BIS Standards.
4.	SMPV (U) Rules, 1981	Testing facilities under development.

B. QUALITY CONTROL TESTS:

The Testing Station also renders testing services for quality control in the field of products covered under Acts / Rules administered by the Organization.

C. UN CLASSIFICATION TESTS (Opens New Frontier for Export of Explosives):

Departmental Testing Station has commissioned the facilities for UN Classification Tests for rendering services to the Explosives Industries to facilitate export of their products at competitive price in international market by way of classifying the explosive product with specially designed packaging as per UN Regulations for transport of dangerous goods.

Products with specially designed packaging are classified to 1.4 with compatibility group B or S, after assessment on evaluating the test results. Director General of Shipping is the competent authority to issue the certificate based on test report and assessment made by Departmental Testing Station. Exporters can ship their products in General Cargo Ships with 1.4 classification certificate thus saving huge freight than otherwise in Explosives Cargo Ship. Also exporters avail the easy availabilities of these ships which helps them to deliver the consignment in time as availability of Explosives Cargo Ships is limited which delays the shipments.

D. TESTING OF SAMPLES:

During the year, the following nos. of different samples were tested at Departmental Testing Station.

S No.	DESCRIPTION	QUANTITY (Nos.)
1.	EXPLOSIVES	
	Slurry/Emulsion Class-2	165
	Pentolite Booster Class-3 Div.2	24
	Fireworks	230
	Safety Fuse	12
	Gun Powder	05
	Detonators	285
	Detonating Fuse	24
2.	CFB Packages of Explosives	
	Samples for new approval propose	05
	Samples drawn by Circle/Sub- Circle officers	215
3	Petroleum Tank Lorry Safety Fittings	--
	For new approval	--
	For revalidation	--
	Total	965

E. DESTRUCTION OF EXPLOSIVES: SAMPLE REMNANT DESTROYED.

Class-1	--
Class-2	1975.8 Kgs
Class-3 Div.2	221 Kgs
Class-6 Div.1	--
Class-6 Div.2	913 Mtr.
Class-6 Div.3	9290 Nos.
Class-7 Div.2	----

F. REVENUE :

During the year, Departmental Testing Station has earned revenue of Rs.61,52,361/-.

FIREWORKS RESEARCH & DEVELOPMENT CENTER (FRDC) AT SIVAKASI

In compliance to the Hon'ble Supreme Court's directions in its judgment; dated 18.7.2005 in the case of W.P. (Civil No.72 of 1998); PESO had initiated the process in time, on setting up Fireworks Research & Development Center (FRDC) at Sivakasi under Plan schemes.

Creation of Civil structure of FRDC was taken up under 10th plan and completed in all respects. The work executed includes purchase of 2.025 Hectares of land, providing compound wall, bore well, water pipelines, light posts, internal roads, construction of main building housing laboratories & allied facilities, etc. Equipping of FRDC and creation of technical and non-technical manpower are proposed under 11th Plan, to make FRDC fully operational.

In pursuant to the directives of the Hon'ble Supreme Court, the various parallel measures taken by PESO and their outcome are as under:

PESO had classified the fireworks into Sound emitting crackers and Color/ light emitting crackers and revised the authorized list of fireworks items, in compliance to the directives of Apex Court. The same has been published by Department of Industrial Policy and Promotion (DIPP) Ministry of Commerce & Industry, New Delhi; Vide GSR No. 225 dated 06/09/2006 in the Gazette of India, Part-II, Section 3, Sub-section (i). PESO had developed compositions for sound producing firecrackers to be within the limits prescribed by Environment Norms; with the technical assistance of MEPCO Schlenk Engineering College, Sivakasi. This chemical formulae specify the proportion/composition as well as maximum permissible weight of every chemical used in the manufacture of four commonly used sound producing firecrackers viz., (a) Atom Bomb, (b) Chinese Crackers, (c) Maroons & (d) Garland crackers with specific reference to its shape, size, dimensions and confinement, so as to satisfy the requirements laid down under Govt. of India Notification No. GSR 682(E) dated 05/10/99.

The formulae have been given to all fireworks manufactures in India for strict compliance. The same has also been made available in PESO's Website: <http://peso.gov.in> for information of all concerned as well to the public.

e-GOVERNANCE

Continuing the e-Governance initiative under the 11th Five Year Plan, following milestones have been achieved by PESO.

All the PESO offices have been brought under Exponet Network. Upgraded leased line speed to 2 Mbps for five circle offices with fall back arrangement. Similarly the leased line speed has been enhanced to 512 Kbps for 18 Sub-Circle offices.

DTS, Gondkhairy and FRDC Sivakasi have also been provided with 512 KBPS leased line connectivity.

All explosives manufacturers are submitting their daily manufacturing details on day to day basis online. There is an achievement of 100% in respect of submission of RE-7 online by all manufacturers.

Over 95% of licensees of LE-3 (possess to sale and use explosives) have registered for submission of RE-7 (return of explosives) online and submitting their quarterly explosives returns i.e. RE-7 using the PESO's online system.

Online issue of show cause notices to those licensees who have not registered so far or even after registration, not submitting the RE-7 online.

To further strengthen the process of monitoring the transactions of explosives, the PESO started online generation of RE-12 (for sale & transport of explosive) facility for all manufacturers and dealers. All manufacturers and most of dealers are generating RE-12 online. This has facilitated them in preparation of their RE-7 (quarterly returns) with respect to sale entries.

To facilitate better response to internal offices and also to accommodate RE-7 data being receive in bulk through online facility, internal storage has been enhanced to 2 Tera Byte. New RACK servers with SAN storage have been put into use for better functioning of existing software.

Upgrading of existing Internet gateway from 4 Mbps shared to 10 Mbps dedicated throughout for effective implementation of online submission of Form RE-7 and Form RE-12 has been planned in immediate future.

Video Conferencing systems have been installed and put into use for five Circle offices and Head Office at Nagpur.

Further the new application modules developed under 11th Five Year Plan project have been put under rigorous testing. These application modules will facilitate online submission of applications by licensees under various rules administered by PESO.

MEETINGS-SEMINARS-LECTURES-TRAINING PROGRAMMES- FOREIGN VISITS OF CHIEF CONTROLLER OF EXPLOSIVES

Seminars:

- 1) Attended One day Seminar on safety consideration in design operation and Maintenance of Pressure Vessels ORGANISED BY Gujarat Safety Council at Baroda.
- 2) Attended inaugural session of Workshop on Drilling and Blasting for Surface and under ground excavation organized by Central Board of Irrigation on power.
- 3) Delivered lecture on 'Safety requirements in Handling and storage of POL in jetties and port Installations' at Indian Maritime Seminar at New –Delhi Organised by Gateway and Ministry of Shipping.
- 4) Attended Round Table conference and discussion in World LPG sub-continental Regional Summit at Delhi.
- 5) Attended World Conference of Airport Fuelling Stations organized by M/s IOCL at Chennai.
- 6) Attended conference on 7th Asia Gas Partnership Summit-2012 organised by GAIL.

Meetings:

- 1) Attending meeting at MOPNG regarding amendments of OISD 116 and 117.
- 2) Chaired the meeting of the Committee set up to review the safety of CNG Dispensing Stations at Mumbai.
- 3) Attended meeting of the Parliamentary Standing Committee on Gas Cylinder Rules.
- 4) Attended the Board Meeting of LPG Equipment Research Centre, Bangalore and assessment of the facilities of the Research Centre.
- 5) Attended 29th Safety Council Meeting at Petroleum Ministry, New Delhi.

**MEETINGS-SEMINARS-LECTURES-TRAINING PROGRAMMES-FOREIGN
VISITS OF JOINT CHIEF CONTROLLER OF EXPLOSIVES, NAGPUR**

Lecture:

- 1) On 29/04/2011 delivered a lecture on Petroleum Rules, 2002 in a training programme at Regional Labour Institute, Faridabad.
- 2) On 29/04/2011 delivery a lecture on Gas Cylinder Rules, 2004 in a training programme at Regional Labour Insitute, Faridabad.

Meetings:

- 1) On 20/04/2011 attended a meeting a consultative Evaluation Committee on Monitoring and Tracking of Explosives at DIPP, New Delhi.
- 2) On 28/04/2011 attended a meeting on Result Framework Document (FRD) at Udyog Bhawan, New Delhi.
- 3) On 15/09/2011 attended a workshop on Awareness programme on iPV6 at DIPP, Udyog Bhawan, New Delhi.
- 4) On 29/09/2011 attended a meeting at DIPP, New Delhi in connection with NISG project on tracking & monitoring of Explosives.
- 5) On 17/10/2011 attended a meeting at DIPP, New Delhi in connection with review of progress on NISG project on Tracking & Monitoring of Explosives.
- 6) On 23/11/2011 attended a workshop on NISG project on Effective Tracking and Monitoring of Explosives at DIPP, New Delhi, Also attended a review meeting on NISG project on Tracking and Monitoring of Explosivies.
- 7) On 31/01/2012, 16/02/2012 & 17/02/2012 attended a meetings at DIPP, New Delhi in connection with NISG project on Tracking & Monitoring of Explosives.

MEETINGS–LECTURES–SEMINARS–TRAINING PROGRAMMES OF THE OTHER OFFICERS OF THE ORGANIZATION

SOUTH CIRCLE:

1. On 2.8.2011 Shri B.Rangswamy DyCCE delivered lecture on Explosives Rules at Tamilnadu Police Academy at Vandalur Dr.S.K. Dixit accompanied.
2. On 24.8.2011 Shri R.Venugopal CE and Dr S.K.Dixit attended Tamilnadu Police Duty Meet at Vandalur and functioned as Judges for antisabotage check competition. Their contribution was appreciated by Shri R.SEKAR, IPS, Addl.DGP, CB CID.
3. On 27.8.2011 Shri S Sarguaraman, Jt.CCE, SC Chennai addressed Fireworks shop licence holders of Bangalore on Complete Safety Aspects in receipt, storage and sale of fireworks.
4. On 28.9.2011, Paper contributed by Shri R.Venugopal, CE on Cathodic Protection of Underground LPG tanks in ALDS in the World LPG Conference at DOHA, QATAR.
5. On 30.11.11 Jt. Chief Controller of Explosives, South Circle Chennai inaugurated training orientation for safety in manufacturers of fireworks and safety. The 1st day's programmed was attended by workers from about 20 factories in and around namaskrithampatti near Sivakasi.
6. On 29.2.2012 Shri S.Sargunaraman JtCCE delivered lecture on the role of PESO in Aviation in the 11th International Aviation conference at Muttukadu.
7. Shri T.O.Sasi, Dy.CCE., attended meeting 7/7/2011 conducted by the Collector, Virudhunagar District at Collectorate. Matters pertaining to formation of squad with officials of Revenue, Police, Factory Inspectorate and Fire Service to conduct inspection of fireworks factory to ensure safety.
8. Shri T.O.Sasi, Dy.CCE., attended a review meeting on 3/8/2011 in connection of prevention of accident in the fireworks manufacturing factories conducted by the Hon'ble Minister of Labour, Govt. of Tamil Nadu at Collectorate Virudhunagar.
9. Shri T.R.Thoams, CCE., visited Sivakasi and presided over the inaugural function of FRDC on 14.7.2011 Hon'ble Member of Parliament, Virudhunagar constituency declared open the premises of FRDC in the presence of the Joint Secy.,(Explosives) Ministry of Industry and Commerce, New Delhi and Collector, Virudhunagar District. The JtCCE., SC., Chennai participated in the inaugural function.

WEST CIRCLE

Lectures/Meetings, Seminars,Workshop ,organized/attended

1. Shri S.C. Maiti, JtCCE & Shri R.K. Maindola, Dy.CCE attended a meeting on 12/13.05.2011 for task force joint meeting at Mumbai. The meeting was convened by Chief Controller of Explosives, Nagpur to fix the modalities of CNG cylinder filling, storage, transport & related pipeline operation and testing.

2. Shri R.K. Maindola, Dy.CCE delivered a key note address on 15/05/2011 to the Members of Chemical Industries of Kalyan Ambernath Manufacturers Association held at Dombivali.
3. Shri S.C. Maiti, JtCCE conducted a programme on “Emerging Global Standards & Practices in Quantitative Risk Assessment (QRA)” for the benefit of the all officers of this office on 16.06.2011. The presentation was given by Dr. Nicholas Cavanagh, Det Norske Veritas AS (DNV), UK.
4. Shri V.K. Mishra, Controller of Explosives attended a meeting on 29/07/2011 with Addl. Chief Secretary “Homes” regarding disposal of seized / imported explosives of defence origin for obtaining the “Letter of Assistance” desired by DIPP, Ministry of Commerce and Industry, New Delhi.
5. Shri S.C. Maiti, JtCCE , conducted a meeting on 18/08/2011 with the officers of ONGC. The meeting was regarding the upgradation of Safety Standard in the various licensed premises. The detailed discussion with technical team of ONGC was held especially regarding moisture and hydrogen content in the CNG dispatched to MGL for filling in cylinders and use for automotive purpose.

NORTH CIRCLE:

SEMINAR:

1. One day workshop was organized by PESO, Faridabad on “**CNG Safety and Challenges in CGD**” at RLI Auditorium, Faridabad on 12/01/2012 with great success under leadership of Shri R.C.Kaul JtCCE, Faridabad. More than two hundred participants from CGD’s Sector attended the workshop. A mini exhibition comprising of eight vendors was also organized on the sidelines adjoining the Auditorium and the equipments along with accessories were elegantly displayed to allure the attention of visitors.
2. One day Workshop on Explosives Rules and Online Filling of Return organized by DCCE, Chandigarh on 17/12/2011 at Shimla Work shop was chaired by Shri R.C.Kaul JtCCE, Faridabad.
3. Shri R.C.Kaul, JtCCE, NC, Faridabad chaired a technical session on Statutory requirements for Installations in Hazardous area at a seminar on “Instrumentation and Automation-Enriching Energy, Ensuring Safety” organized by International Society of Automation at Hotel Taj, New Delhi on 26/09/2011.
4. PESO, Faridabad organized a workshop for Competent Persons of North Circle, under Petroleum Rules 2002 and SMPV(U) Rules 1981 in Faridabad on 05/12/2011. During the workshop, the Competent Persons were apprised about the changes in policy proposed to be made by CCE in respect of selection and revalidation of approvals issued to Competent Persons. A demonstration was also arranged for benefit of the Competent Persons for issue of online certificates as envisaged by the CCE, Nagpur.

LECTURES:

1. Shri P. Kumar, Dy. CCE, Chandigarh delivered lecture to the officials of M/s Hindustan Petroleum Corporation Ltd., Pampore (Pulwama) (J & K) on “Various rules and regulations framed under Petroleum Act/Explosives Act” on 24/04/2011, officials of M/s Khyber Petroleum & Minerals, Ladu Latpora (District Pulwama), Kashmir on 24/04/2011 & addressed the officials of M/s Hindustan Petroleum Corporation Ltd., Bari Brahmana, Jammu on 20/04/2011 during the celebration of National Fire Safety Week.
2. Shri Ajai Singh, CE, Chandigarh delivered a lecture on Explosives Rules, 2008 and on-line filling of explosives returns for the licensees under Explosives Rules, 2008 during seminar at Sai Bhawan, Sector 4, New Shimla-171009 (H.P.) on Explosives Rules, 2008 and on-line filling of explosives returns for the licensees under Explosives Rules, 2008 on 17.12.2011.

WORKSHOPS

1. Dr. A. Kumar, DCCE, Jaipur and Dr. Yogesh Khare, CE, Jaipur attended one day workshop on CNG Safety and challenges on CGDS at Faridabad on 12/01.2012 organised by JtCCE, N.C. Faridabad and Director General Factory Advise Service and Labour Institute at RLI auditorium at Faridabad
2. The Office of D.C.C.E., Jaipur organized one day workshop on 28/01/2012 for licensees of E.R. 2008 in connection with on line submission of RE-7 and RE 12 of E.R. 2008 conducted by Shri S. Dhoke, Technical Director, NIC, NITPU, Nagpur
3. Dr. A. Kumar, DCCE, Jaipur attended a fire drill on 22/09/2011 at LPG Bottling Plant of M/s. BPCL, Jaipur alongwith officials of oil companies, District and Police administration .

CENTRAL CIRCLE:

MEETINGS /SEMINARS /LECTURES

1. A seminar on “CNG Safety’ was organised in the office of Jt CCE, Agra on 26/08/2011. Officers from sub-circle offices and officers of IGL, CUGL, Sanwariya Gas and Teesta Construction participated in the seminar.
2. An interactive session of officers of Central Circle, Agra and BPCL officers of all Territories of UP and Zonal office, Noida was organized on 10/09/2012 at Agra.
3. Shri Kailash Kumar, JtCCE participated in two interactive sessions with officers of IOCL and HPCL on 15/09/2011 at Lucknow. Shri R.Piplani, CE accompanied.

EAST CIRCLE:

MEETINGS /SEMINARS /LECTURES

1. Presentation on Safety & Precautions System followed, for use of explosives in Seismic Exploration –By ONGC Officials. Officers of Jt.CCE, EC, Kolkata and ONGC officials, Kolkata attended the presentation.
2. A presentation on POL installation and river jetty, unloading of POL Products – Safety and hazards was delivered by officials of M/s. HPCL, Terminal, Budge Budge. Officers of O/o. Jt.CCE,EC,Kolkata and official of M/s. HPCL, Budge Budge Installation, South 24-Parganas participated in the presentation..
3. Dr.D.J.Roy, Jt.CCE has delivered a lecture on “Designing of Tank Farms for Storage of Petroleum Products & Hazardous Goods for Minimizing offset Impacts” at FICCI in a seminar on Emergency Planning in Industries, Hazard, Waste Management on safe storage, Transportation of Petroleum Products, Natural gas through pipeline and tankers at Kolkata which was attended by the delegates from various organization.
4. A technical presentation was delivered by officials of M/s.Bharat Petroleum Corporation Ltd., LPG Bottling Plant, Uluberia in the O/o. Jt.CCE,EC,Kolkata. All the officers of this office participated in the presentation.

REPRESENTATION OF SCHEDULED CASTES/SCHEDULED TRIBES/OBCs/EX-SERVICEMEN AND PHYSICALLY DISABLED PERSONS IN SERVICE

1. REPRESENTATION OF SCHEDULED CASTES/TRIBES/OBCs:

The Scheduled Castes/Scheduled Tribes Cell in the Organization functions under a Liaison Officer of the rank of Dy. Chief Controller of Explosives. Similar Cells are also functioning in Circle Offices of the Organization.

The Scheduled Castes/Scheduled Tribes Cell not only deals with the proposal relating to the de-reservation of posts but also looks into the grievances, if any, in respect of service matters of employees belonging to the categories of Scheduled Castes/Scheduled Tribes and takes appropriate remedial measures to alleviate their grievances/problems.

The Organization also issues periodic directions to the administrative sections as well as the appointing authorities under its control to seek proper implementation of the directives on reservation for members of the Scheduled Castes/Scheduled Tribes in services.

The break-up of the number of Scheduled Castes/Scheduled Tribes and Other Backward Classes persons belonging to Group 'A', 'B', 'C' & 'D' posts in the Organization and its subordinate offices is given below:

Sr. No.	Category of Posts	No. of Scheduled Caste persons	No. of Scheduled Tribe persons	No. of Other Backward Classes persons
1	Group 'A'	15	04	19
2	Group 'B'	11	02	04
3	Group 'C'	54	26	57
4	Group 'D'	23	07	09

2. REPRESENTATION OF PHYSICALLY DISABLED PERSONS IN SERVICE

The Organization has been making vigorous efforts to ensure effective implementation of reservation orders for physically handicapped persons. The Organization has identified some Group 'A', 'B', 'C' and 'D' posts, which are held by physically handicapped persons.

The break-up of the number of physically handicapped persons belonging to Group 'A', 'B', 'C' & 'D' posts in the Organization and its subordinate offices is given below:

S.No.	Category of Post	No. of Physically Handicapped Persons
1	Group 'A'	1
2	Group 'B'	0
3	Group 'C'	4
4	Group 'D'	3

VIGILANCE ACTIVITIES

Vigilance activities of the Organization are under direct command of Chief Controller of Explosives, Head of the Organization. Apart from Head office at Nagpur, Vigilance Cell is functional in all the Circle and Sub-Circle offices, Testing Station and FRDC of the Organization throughout the country. The Head of the each subordinate office is heading the vigilance cell and reports to the Chief Controller of Explosives directly.

Preventive vigilance receives priority attention with primary emphasis on identification of areas, which are sensitive or prone to malpractices and temptations. Instructions and guidelines issued by the Department of Personnel & Training, Central Vigilance Commission and Chief Vigilance Officer of the Department of Industrial Policy and Promotions are followed.

Vigilance Awareness Week was observed during the period Nov. 05 to 09, 2012 in all the offices of the Organization in accordance with the guidelines of CVC. All the officers and staff members of the Organization took pledge and various activities were organized to high light awareness about effective preventive measures undertaken through system improvements and use of Information Technology to achieve transparency, accountability, fair play, objectivity and timely response in all matters.

Following measures have been taken to monitor activities of officers of the organization:

1. Activities of sensitive nature have been identified and surveillance is maintained thereon.
2. Activities relating to frequent dealing with common public have been decentralized to the Circles & Sub-Circles, thereby reducing delay in disposals and reducing possibilities of malpractices.
3. Heads of the offices monitors activities of subordinate officers regularly.
4. Activities of Heads of Sub-Circle offices are monitored by Heads of Circle Offices.
5. The Chief Controller monitors activities of Heads of Circle offices and other offices of Head office.

6. Regular and surprise inspections are carried out by nominated officers and Heads of offices/Organization to review sensitive areas/activities of officials.
7. Vigilance activity has also been extended to cover the visitors coming for meeting the concerned officers on official matters, by making a separate reception room, visitor's room and introducing a system of issue of visitors passes which are to be signed by the concerned officers. Also the reception area, visitor's area, lobby etc. is monitored through CCTV system.
8. List of dealing officers with their authorized areas of activities have been conspicuously displayed in the reception room.
9. List of officials suspected to be indulging in malpractices is maintained and their activities are closely monitored.
10. Public complaints about malpractices are given top priority and are investigated by the Head of the Organization /Head of the Office.
11. Name and telephone number of the Head of the Organization and Heads of offices have been notified under the 'Grievance Redressal' sub menu of Organizations web site <http://peso.gov.in> and redressal of genuine grievance / complaints of stake holders is assured in the Citizens Charter of the Organization, hosted on the website of the Organization with a view to facilitate easy access by the aggrieved parties.
12. The dealing officers and assistants are made acquainted with the provisions of conduct rules and instructions issued by the Government from time to time.

USE OF OFFICIAL LANGUAGE IN PESO

Petroleum and Explosives Safety Organisation, along with its five circle offices, eighteen Sub-circle offices, , Departmental Testing Station and Fireworks Research and Development Centre is making coordinated efforts for compliance of the Annual Program issued by the Department of Official Language. Under the leadership of Chief Controller of Explosives the Organisation is marching towards its goal with utmost dedication and making every effort for promotion of Official Language.

With the objective of creating awareness for progressive use of Hindi in official work, various programs were organized in all the offices throughout the year to motivate the employees for doing maximum official work in Hindi. The incentive scheme of Central Government for noting/drafting done originally in Hindi in official work has been implemented in the organisation and as a regular practice; this year also employees participating in the scheme were awarded during “Hindi Fortnight” function.

Unicode - standard language for encoding has been installed in all computers of the Organisation. Website of the organization is almost bilingual. In order to ensure compliance of Section 3(3) of the Official Languages Act, online modules bilingualisation is under process. All letters received in Hindi have compulsorily been replied in Hindi.

Monitoring and Inspections:

On 25th January 2011, officers of the Northern Regional Implementation Office-II, Gaziabad inspected the office of the Jt. Chief Controller of Explosives, Agra with a view to ensure use and compliance of Official Language Policy .

Meetings of the Town Official Language Implementation Committee (TOLIC)

In order to ensure progress of Hindi, the officers of Head office as well as circle and sub-circle officers regularly attended the meetings of the TOLIC. The employees also participated in the various competitions held by TOLIC. Contribution for the activities of TOLIC is made annually.

Publication of Hindi Magazine “Visphotak Darpan”

For the publicity of the official language, Hindi Magazine “**Visphotak Darpan**” issue - 11 was published during the Hindi Fortnight by the Head office. Officers and staff of Head Office as well as circle and sub-circle offices contributed their articles, stories, poetries etc. for the magazine.

Also Agra office of the organisation publishes its journal “Madhyanchal Darpan” and Madhyanchal Samachar regularly.

Hindi Training

Priority is being given to the work of imparting Training in Hindi, including typing, shorthand, Pragya etc. and almost all the employees have been trained in Hindi.

Hindi Workshops

In order to encourage progressive use of Hindi in official work at least four workshops are organized throughout the year in all the offices of PESO. For effective implementation of Official Language policy, employees are advised to use simple and easy Hindi language for their day-to-day work.

Hindi Fortnight

PESO, Nagpur along with all the circle and sub-circle office celebrated “Hindi Day” as well as “Hindi Fortnight” with great enthusiasm to increase the use of Official Language Hindi in the official work.

During “Hindi Fortnight” various competitions were organized, such as - Hindi Typing, Noting and Drafting, Essay writing, Handwriting competition, Chitra par aadharit kahani, Shabdgyan, Prashnottari and Antakshari. An exhibition of Hindi books was also arranged. “Hindi Day” was celebrated on 14th September 2011 with great enthusiasm. On this occasion Honable Home Minister’s message and the memorandum forwarded by the Ministry was read out for compliance. Winners of the competitions were awarded suitably.

Achievements

For two successive years 2009-10, and 2010-11 PESO, Nagpur office bagged consolation prizes for the Hindi Magazine “Visphotak Darpan” in the award ceremony held on 26th August 2011 organised by the Town Official Language Implementation Committee, Nagpur.

Office of the Jt. Chief Controller of Explosives, Central Circle, Agra bagged First Prize for the year 2010-11 and was declared as an **Ideal Office** by the TOLIC, Agra. Agra office continued their endeavour for greater implementation of various provisions of Official Language in their day-to-day working. With the slogan “**Har Diwas –Hindi Diwas**” the office celebrated the year as **Hindi Year**. Various programs related to Hindi were organized every month.

In addition to this individual certificates were awarded to Shri D. Vijayan, Jt. Chief Controller of Explosives and Smt. Shravani Ganguly, Jr. Hindi Translator for their outstanding contributions in execution of the Official Language Policy. Non-Hindi language speaking honour was bestowed on Shri D. Vijayan, Jt. Chief Controller of Explosives in the form of a memento (Shield).

The Office of Dy. Chief Controller of Explosives, Allahabad bagged second prize for enhancing the use of official language Hindi and Shri Abdul Basir, Dy. Controller of Explosives was praised for his contribution by awarding him shield and certificates by TOLIC, Allahabad.

Petroleum and Explosives Safety Organisation, is committed to its statutory responsibilities of Official Language.

INSPECTIONS OF LICENSED/APPROVED PREMISES

In spite of severe resource constraints due to several posts of inspection officers in various grades remaining vacant, attempts were made to intensify inspection activities of hazardous premises licensed/approved by the Organization under various Acts & Rules made there under.

UNDER EXPLOSIVES ACT, 1884:

During the year, 9,905 units (out of total 79,249 units licensed) were inspected. This amounts to inspection of 12.51% of the total premises. The units inspected mentioned above include 4,288 Licensed units under Explosives Rules, 2008; 2,784 Licensed units under Gas Cylinder Rules; 2,833 licensed units under SMPV (U) Rules.

UNDER PETROLEUM ACT, 1934:

During the year, 5,262 units licensed were inspected, which amounts to about 3.61% of the total 1,45,470 licensed units. The above inspections include 5,247 units licensed under Petroleum Rules, 2002 and 15 premises under Calcium Carbide Rules, 1987.

In all out of 224719 units covered under licenses and approvals granted by this Organization under various Acts & Rules, 15,167 premises (6.75%) were inspected during the year 2011-12. Statistical information about the premises licensed/approved under various Acts & Rules and inspections carried out thereof are given in Table-I and II, and Production of Explosives for the last 5 years are given in table III

Wherever defects, irregularities or violations of rules and conditions of licence were observed during inspections, steps were taken by giving notice to the licensees for correction/compliance. In cases of serious violations that are likely to endanger safety, licenses were suspended or cancelled depending upon the nature of violation and seriousness of offence. In cases of violations regular follow-ups were made for ensuring safe conditions and safe practices.

Table – I

**DETAILS OF INSPECTION CARRIED OUT DURING THE YEAR 2011-2012
PREMISES COVERED UNDER LICENCE**

Number of Licensed Premises & Inspection					
Rules	As on 01.04.2011	Licensed in the year 2011-12	License cancelled in the year 2011-12	Total as on 31.03.12	No. of Inspections in the year 2011-12
Explosives Rules, 2008	33068	4965	217	38033	4288
Gas Cylinder Rules, 2004	17004	1760	47	18764	2784
SMPV(U) Rules, 1981	16849	5603	473	22452	2833
Petroleum Rules, 2002	124130	20671	117	144801	5247
Calcium Carbide Rules, 1987	668	1		669	15
Total	191719	33000	664	224719	15167

Table II

**Premises approved under Explosives Act 1884 and Petroleum Act 1934
(Licence not required)**

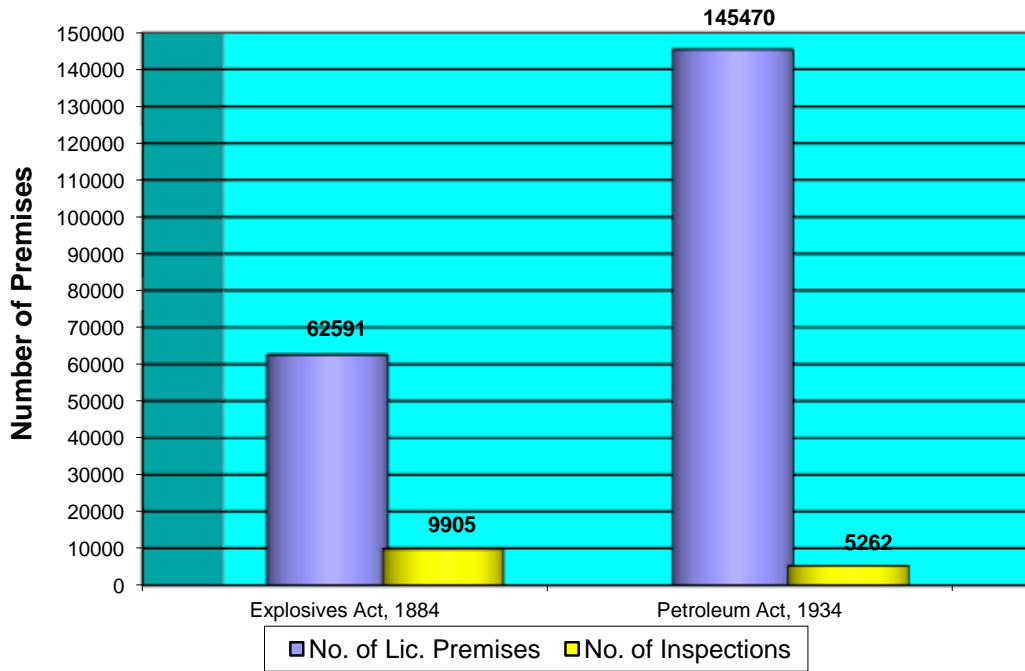
Gas Cylinder Rules, 2004	609
SMPV(U) Rules, 1981	225
Petroleum Rules, 2002	292

Table - III
Production of Explosives for the last 5 years

Description	Annual Installed Licenced capacity	2007-08	2008-09	2009-10	2010-11	2011-12
Class 1 Gun Powder (Metric Tonnes)	1595.55	624	908.10	827.5	688.6	710.6
Class 2 (a) Cartridges (b) Site Mixed (Metric Tonnes)	580386.5 1350385	224817.0 334740.0	254807.8 343018.5	225615.2 389825.7	183533.7 359943.5	238193 483828
Class 3 Div-2 Booster and PETN* (Metric Tonnes)	16418.67	4090	3206	4449.3	3573.8	5063.1
Class 6 Div 1 Safety Fuse (Million meters)	268.29	127	132	123.1	77	81.1
Class 6 Div 2 Detonating fuse (Million mtrs)	576.2	292	334	390.6	284.6	370.6
Class 6 Div 3 Detonators (million no.)	974	589	610	697.5	724.2	970.7

*PETN- Penta Erythritol Tetra Nitrate

Chart showing the number of Licensed Premises and number of Inspection carried out during 2011-2012



ACCIDENT INVESTIGATION
SOUTH CIRCLE, CHENNAI**A Under Explosives Act, 1884****Explosives Rules 2008:-**

1. Date: 26/04/2011 Place: Nathikudi, Virudhunagar
Killed: 4 Injured: 3

Fire/explosion occurred in the ingredient shed of M/s The Coronation Fireworks. The accident might have occurred due to spark/fire generated while careless handling of ingredient.

2. Date: 16/05/2011 Place: Kukutlpally, District Rangareddy.
Killed: 1 Injured: 1

An explosion took place in crimping cubical no 59 in Building No 27A of M/s Gulf Oil Limited, while carrying the crimping of the copper delay detonators. The accident might have occurred due to copper azide formation which is highly friction sensitive, formed by a chemical reaction copper with lead azide present in ASA composition.

3. Date: 26/05/2011 Place: Bajpe, Mangalore, District D.K..
Killed: 3 Injured: 4

While conducting blasting operations inside Cavern at about 1600 hrs, some misfired holes were noticed by Sri Seung Song, Safety Engineer and whole team had decided to bring the huge boulder containing explosives outside the cavern. The boulder with explosives was brought on top of the cavern in open space and unloaded. While defusing the misfired explosives, explosion took place.

4. Date: 04/06/2011 Place: Sevalpatti, District Virudhunagar.
Killed: 2 Injured: Nil

Fire/explosion occurred in the manufacturing shed of M/s Shakthi Fireworks Pvt. Ltd. The accident might have occurred due to generation of frictional spark by the grit particles sticking in the pellets.

5. Date: 05/08/2011 Place: Kalayarkurichi, District Virudhunagar
Killed: 10 Injured: 2

Fire/explosion occurred in the ingredient shed of M/s Supreme Pyroworks. The accident might have occurred due to mishandling of gun powder premix near ingredient shed.

6. Date: 12/08/2011 Place: Kukutlpally, District Rangareddy
Killed: 1 Injured: Nil

An explosion took place in ASA drying Building no 43G, of : M/s Gulf Oil Limited, while carrying out the ASA drying, Presence of grit in the ASA composition or presence of needle shaped lead azide crystals would be probable cause of the accident.

7. Date: 13/08/2011 Place: Avudaiarpuram, District Virudhunagar.
Killed: 4 Injured: Nil

Fire/explosion occurred in the Dipped Splint Rack (DSR) Room of a colour match factory of M/s Vinayagar Colour match Factory. The accident might have occurred due to frictional spark generated while removing the frame carelessly.

8. Date: 03/10/2011 Place: Gangarakottai, District Virudhunagar.
Killed: Nil Injured: Nil

Fire/explosion occurred in the fireworks factory of M/s Indian National Fireworks. The accident might have occurred due to Impact/friction generated by mishandling of sensitive composition or dust explosion by dissipation of static charges might have caused the accident.

9. Date: 06/10/2011 Place: Vadapatti, District Virudhunagar.
Killed: 2 Injured: Nil

Fire/explosion in a manufacturing shed of M/s Sri Krishna Pyro Exports Pvt. Ltd. The accident might have occurred due to decomposition of chemical composition used for manufacture of combination fireworks.

10. Date: 30/10/2011 Place: Peddakandukur, District: Nalgonda
Killed : Nil Injured: Nil

A fire and explosion took place while ASA pressing operation was in progress in the detonator manufacturing factory of M/s Premier Explosives Limited. The probable cause of the accident due to press fire.

11. Date: 09/12/2011 Place: Davangere, District: Davangere
Killed : One Injured: Nil

While dragging the fireworks cases for stacking purposes, fire broke out at about in which one person was killed due to suffocation in a licence fireworks shop of Sri H.V. Mallikarjuna Babu.

12. Date: 28/12/2011 Place: Mudalipatti, District Virudhunagar.
Killed: 4 Injured: 2

Fire/explosion occurred in the II stage drying shed of M/s Shreenivas Amorce Industries. The accident might have occurred due to impact/friction developed while careless handling of dried amorces sheets.

13. Date: 29/02/2012 Place: Peddakandukur, District Nalgonda.
Killed: Nil Injured: Nil

A fire and explosion took place while ASA pressing operation was in progress in the detonator manufacturing factory of M/s Premier Explosives Limited. The probable cause of the accident due to press fire

14. Date: 07/03/2012 Place: Sithurajapuram, District Virudhunagar.
Killed: 2 Injured: Nil

Fire/explosion occurred in the II stage drying shed of M/s National Paper Caps Factory. The accident might have occurred due to impact/friction developed while careless handling of dried amorces sheets.

15. Date: 09/03/2012 Place: Bommalararam, District Nalgonda.
Killed: 1 Injured: Nil

An explosion took place while ASA drying building no 7 of M/s A. P. Explosives Pvt Limited while carrying out the ASA drying, Probable cause of the accident is under investigation

16. Date: 26/03/2012 Place: Chityal, District Nalgonda.
Killed: 1 Injured: 3

An explosion took place while ASA dosing of M/s A. P. Explosives Pvt Limited Pvt Ltd Probable cause of the accident is under investigation.

17. Date: 27/03/2012 Place: Sankarapandiapuram, District Virudhunagar.
Killed: 2 Injured: Nil

Fire/explosion occurred in the white powder filling shed of M/s Standard Fireworks Pvt. Ltd. The accident might have occurred due to decomposition of white powder composition used in the manufacture of fireworks called Wheel (chakkaram).

Under SMPV (U) Rules, 1981

1. Date: 22/09/2011 Place: Chokkahalli, District Bangalore Rural.
Killed: 1 Injured: Nil

LPG storage pressure vessel got bursted at the time of hydro test by the competent person of M/s Indo Gas Technologies, Bangalore.

Under Petroleum Rules, 2002

1. Date: 02/07/2011 Place: Guntur, District Guntur
Killed: 1 Injured: Nil

The incident had occurred at the service water pump shed (where 2 wheelers are being washed) constructed between the RO compound wall and Hero Honda Cold Works bay, in a retail outlet of M/s Bharat Petroleum Corporation Limited A.V Krishna Murthy & Sons. Probable causes of the incident. The water hose and nozzle used for washing are electrically continuous with motor which might have electrocuted to the person in operation.

2. Date: 21/01/2012 Place: M/s MRPL, Mangalore, District D.K..
Killed: 1 Injured: 5

Two sumps viz. Oil-water sump and contaminated rain water sumps are situated next to each other near Sulphur Recovery Unit Phase-2 and were constructed in the year 1999 as a part of phase-2 expansion of the refinery.

During maintenance, some hot work was being carried out. While conducting hot work to the frame on which pump was placed, an explosion and flash of fire occurred which ripped open the top half RCC slab of the sump. As a result, all the six members sustained injury. Sri Nagesh succumbed to injuries.

Under Unlicensed premises:

1. Date: 29/11/2011 Place: Muchery, Kongad, District Palakkad.
Killed: Nil Injured: 1

Fire/explosion accident occurred in a dense forest area in an unauthorized explosive manufacturing shed. Probable cause of accident might have occurred due to frictional spark while filling gunpowder composition.

2. Date: 15/03/2012 Place: Walajapet, District Vellore.
Killed: 1 Injured: 1

Fire/explosion occurred at an unauthorized fire works manufacturing premises.

ACCIDENT INVESTIGATION

WEST CIRCLE, MUMBAI

A Under Explosives Act, 1884

Explosives Rules 2008:-

1. Date: 18/04/2011 Place: Juarinagar, Distric South Goa
Killed: Nil Injured: 6

The outsourcing agency employed by M/s. GAIL who had employed to carry out the foundation work for laying of the pipeline for gas receiving station did not have requisite knowledge of the route of the Naphtha pipeline going underneath while executing excavation job. The JCB directly hit the pipeline vertically making a rectangular hole, thereafter the naphtha came gushing out and hit the high tension wire resulting in a massive fire.

2. Date : 19/05/2011 Place – Dhaga, Distt. Nagpur, Maharashtra
Killed – 1 Injured - 1
Accident occurred in one of the storage godown of M/s. AMA Industries Limited, Probable cause of the accident is under investigation.

3. Date: 08.06.11 Place – Panchwati, Dist -- Nasik, Maharashtra.
Killed – 3 Injured – 11

The unauthorised fireworks was being manufactured in the ground floor of the three storied building by Shri Manohar Ramchandra Gurnani. The accident occurred during the filling of flash composition (KNO_3 , S, Al) in the Gudka pouch machine for manufacturing of atom bomb / sound producing crackers.

4. Date: 20.02.12 Place – Mangalwedha Dist – Solapur Maharashtra.
Killed – 4 Injured – 11

An accident took place at a magazine in an unauthorised shed adjacent to the fireworks manufacturing factory of M/s. Sagar Fireworks. The atom bomb, laxmi crackers, Chinese crackers and fancy fireworks were being manufactured unauthorisedly. The accident took place while the highly sensitive balls and pallets coated with gunpowder and kept in gunny bags / polythene bags after drying were dragged on the ground resulting in the fire.

Gas Cylinder Rules, 2004

1. Date : 29/08/2011 Place: GIDC, Vapi District: Valsad Gujarat
Killed – Nil Injured – Nil
Leakage of Chlorine Gas from Chlorine Gas Tonner occurred due to mishandling of the cylinder. In place of the empty cylinder, filled cylinder attached to the manifold was lifted with the help of overhead crane resulting rupture of copper tubing connecting cylinder valve to manifold valve which ultimately laid to profuse leakage of Chlorine Gas.
2. Date : 13/03/2012 Place: Chh Road, Sector-21 District: Gandhinagar Gujarat
Killed – Nil Injured: Nil
Fire accident occurred within Petroleum-cum-CNG online station of M/s.Indian Oil Corporation Ltd. while dispensing CNG in to the CNG cylinder fitted to a Maruti Ritz Car. The car was fitted with CNG cylinder through a retrofitted CNG Kit. The filling point of the cylinder was located close to the battery terminal. During the filling process of the CNG could have leak due to the improper fixing of filling nozzle and spark generated from battery terminal ignited the leaked gas. The fire turn in to a big inferno damaging both, Car & CNG Dispenser.

B Under Petroleum Act, 1934

Petroleum Rules, 2002:-

1. Date : 18/07/2011 Place: Umreth District: Anand Gujarat
Killed – 1 Injured - Nil

Fire accident occurred within the sales building of the petroleum retail outlet of M/s.Indian Oil Corporation Ltd. Sudden surge in the voltage may have caused short-circuiting in the incoming cable/electricity switch board provided in the oil store room. The spark generated due to short circuiting ignited the oil and stationery kept in the room.
2. Date : 02/09/2011 Place – Risod, Distt. – Washim.
Killed – Nil, Injured – Nil

The fire incident occurred at a retail outlet of M/s. IOCL As per the FIR filed in Risod Police Station, an unidentified person deliberately put the fire to the dispensing pumps and near the fill pipe of the retail outlet.
3. Date : 07/09/2011 Place: N.H. 8, 10 Km away from Kim Distt. Surat Gujarat
Killed – Nil Injured: Nil

The petroleum tanker carrying Benzene overturned in attempt to save a cattle and caught fire.

4. Date : 04/10/2011 Place: GIDC, Vapi Distt. Valsad
Killed – One Injured: Nil

Accident occurred within a mini petroleum refinery (distillation unit) while carrying out the transfer operation of crude oil collected in plastic and steel barrels using plastic/rubber hose with the help of an electrically operated pump. The air gap between plastic hose and barrels holes allowed the petroleum vapour to escape out of barrels and formed petroleum vapour cloud in and around the place. The static current generated due to the transfer operation could have ignited the petroleum vapour causing the fire accident.

5. Date: 24.11.11 Place – Chembur Dist -- Mumbai Maharashtra
Killed – Nil Injured – Nil

The accident occurred while loading of the Hexane in the Oil tanker was in progress at the filling bay of M/s. HPCL Terminal at Mahul Refinery of HPCL. The shaft and the ball bearing of the motor gagway due to misalignment and the leakage took place. The source of ignition might be spark produced due to friction of the Static and Rotatory part of the pump.

6. Date : 20/02/2012 Place: Saiyadpur District: Surat Gujarat
Killed – Nil Injured: Nil

Fire accident occurred within retail outlet of M/s.Indian Oil Corporation Ltd. while unloading Petroleum Class A from petroleum road tanker in to the underground tank. The accident could have occurred due to the escape of petroleum vapours from dip opening of underground tank , which was not closed after taking dip reading and ignition generated due to static charge developed during unloading as the tanker was not properly earthed.

7. Date : 16/03/2012 Place: Tarapur Chowkdi Distrit: Anand Gujarat
Killed – Nil Injured: Nil

Petroleum tanker was carrying load of Benzene from M/s.Reliance Refinery, Jamnagar. The discharge faucet of tanker was fitted with a manifold in which petroleum might have leaked out and that leaked vapour could have come in the contact with spark of welding turning into a fire accident. The remains of ill fated petroleum tanker were found in front of a welding shop, which apparently indicates that driver had placed the tanker in front of welding shop for minor repair/welding where already welding operations were going on.

CENTRAL CIRCLE, AGRA

ACCIDENTS:

A Under Explosives Act, 1884

Under Gas cylinder Rules, 2004

1. Date – 06.07.2011 Place – Chhatikara, District Mathura.
Killed – 1; Injured – Nil.

An accident occurred during trial run of about 25 K.M natural gas pipeline between Chhata Town and village Jaisinghpura Bangar of Distt. Mathura, UP. Explosion occurred inside the pipeline near the valve at village Chhatikara. The accident occurred due to improper purging of line with nitrogen.

2. Date – 08.08.2011 Place – Gadearjudda, District Haridwar.
Killed – 2; Injured –1

An accident occurred during loading of oxygen filled cylinders into lorry. Cylinder slip resulted to valve broken. Cylinder acted as rocket and strike to cylinder filling shed wall. A big hole formed in wall. The cylinder strike to iron girdle next to the wall in oxygen plant and exploded.

NORTH CIRCLE, FARIDABAD ACCIDENTS

A Under Explosives Act, 1884

Explosives Rules 2008:-

1. Date – 22.08.2011 Place – Kunjpura, District Karnal. Haryana
Killed – 10; Injured – 9.

An explosion occurred during the manufacture of fireworks in unauthorized temporary sheds within the fireworks manufacturing premises of M/s Sri Kumar fire works. The accident occurred while semi-finished products and fireworks composition caught fire due to spark generated from a metallic tool used in manufacture.

2. Date – 22.10.2011 Place – Amritsar, District Amritsar.
Killed – Nil; Injured – Nil.

Fire/explosion occurred at the fireworks shop premises of M/s Billamal Shamhu Nath. The probable cause of the fire seems to be a short circuit in the electrical wiring.

Under SMPV(U) Rule, 1981

1. Date – 16.01.2012 Place – Vasant Vihar, District Delhi.
Killed – 1; Injured – 6.

A fire accident took place in the A.L.D.S installation of M/S Indian Oil Corporation Ltd. Delhi, The accident occurred while an underground LPG vessel was being degassed before preparing it for hydro-static testing. The manhole cover of the vessel was opened up before ensuring that the vessel was completely empty of LPG. As the manhole cover was opened, LPG vapours escaped out and met with a source of ignition at a point about twenty meters from the escape point. The resultant flash back engulfed workers working near the manhole cover resulting in death of one person and seriously injuring the other

Under Gas Cylinder Rule, 2004

1. Date – 23.04.2011 Place – Rohini, District Delhi.
Killed – Nil; Injured – Nil.

A fire accident occurred in the CNG outlet of M/s Indraprastha Gas Ltd. during opening & cleaning of the flange in the incoming CNG line. CNG at high pressure leaked due to passing valve. At the same time an intermediate flange fell down on concrete platform which probably produced a spark and ignited the CNG causing an explosion followed by fire.

2. Date – 19.07.2011 Place – Najafgarh, District Delhi.
Killed – 1; Injured – 3.

An Explosion occurred at Gas Cylinders filling cum storage installation of M/s Global Air. The explosion occurred while filling of unauthorized cylinder, which had not been pre-checked for its suitability for filling

B. PETROLEUM ACT 1934

PETROLEUM RULE 2002

1. Date – 26.04.2011 Place – Jodhpur, District Jodhpur.
Killed – Nil; Injured – 2.

The accident had occurred while unloading of Petroleum Class A was in progress in one of the underground tank of the retail outlet of M/S Indian Oil Corporation Ltd. The accident occurred due to leakage of petroleum product from the discharge faucet of the tanker leading to formation of dense petroleum vapour, in the vicinity of the leaking point. The petroleum-air mixture subsequently caught fire due to ignition from an external source probably spark emanating from the exhaust of the vehicle.

2. Date – 29.10.2011 Place – Jodhpur, District Jodhpur.
Killed – Nil; Injured – Nil.

The accident had occurred while unloading of Petroleum Class A was in progress in one of the underground tank of the retail outlet of M/S Bharat Petroleum Corporation Ltd. Sampling was also in progress while unloading was taking place. The Sampling was being conducted in an open bucket which had not being earthed properly. The petroleum vapours emanating from the open bucket and leaking discharge valve of the tanker formed petroleum vapour—air rich mixture. The petroleum air mixture subsequently caught fire due to ignition from an external source probably spark emanating from the exhaust of the vehicle.

3. Date – 18.11.2011 Place – Vasant Kunj, District New Delhi.
Killed – Nil; Injured – Nil.

A fire accident took place in the retail outlet of M/S Indian Oil Corporation Ltd. The small fire had took place in lubricant oil store room probably due to short circuit and fire broke out engulfing the whole retail out let

4. Date – 19.03.2012 Place – Sanganeri, District Bhilwara.
Killed – Nil; Injured – Nil.

A fire accident took place in the retail outlet of M/S Indian Oil Corporation Ltd. involving a petroleum road tanker. The fire initially initiated at a place in between the coupling joint of the hose and discharge faucet of the 2nd compartment of the tanker, while decantation of MS was in progress from the tanker to one of the underground tank of the retail outlet. But during fire fighting operation the hose connection from the fill point of the underground tank was disconnected and there was a heavy spillage of MS through disconnected end of the hose pipe due to failure of emergency shut off valve of the second compartment of the tanker. This spilled MS also caught fire resulting in the entire tanker being engulfed in the fire.

EAST CIRCLE, KOLKATA

ACCIDENTS:

A Under Explosives Act, 1884

Explosives Rules 2008:-

1. Date – 04.04.2011 Place – Chutupalu, PS. Ormanjhim, Ranchi, Jharkhand.
Killed – Nil; Injured -1.
An explosive van carrying 10 tonnes of Class 2 explosives and 9000 mtrs. Of Detonating Fuse fall in a valley. The probable cause of accident was reckless driving by the driver and failure of break of the explosives van.
2. Date – 17.12.2011 Place – Gomia
Killed – Nil; Injured – Nil.
A fire accident occurred in a safety fuse spinning compartment of detonating fuse plant of M/s, Orica Industries. The probable cause of fire was either the friction between metallic guard and pulley or between belt and metallic guard over the drive pulley or heating of PETN dust between pulley and belt resulting in fire.
3. Date – 25.02.2012 Place – M/s ONGC, Ashok Nagar, North 24 Parganas, West Bengal.
Killed – One; Injured – Nil.

An explosion took place during handling of primed explosives which was kept on the ground for logging. The probable cause of accident may be the use of mobile phones by the deceased person.

Under Petroleum Rules, 2002

1. Date - 08.06.2011 Place – HPCL Retail Outlet at Moulali, Kolkata, West Bengal.
Killed - Nil, Injured – Nil

A fire occurred near electric meter and control panel cable junction box at DG room. The probable cause of accident was a sudden high surge of electricity flowed in the armored cable line which leads to short circuit at the junction box resulting in fire.
2. Date – 10.01.2012. Place – IOCL Refinery, Noonmati, Guwahati, Assam.
Killed – Nil; Injured -13.

A fire occurred in a slop tank no. 56. A welding mechine and local electrical panel was found at a distance of about 19 mtrs. From the slop tank. Some welding job may be on. The probable cause of fire may be hydrocarbon vapours coming out vigorously from the slop tank which got ignited from the electrical spark, causing the fire accident.

3. Date - 17.01.2012 Place – BPCL Retail Outlet, Kolkata, West Bengal.
Killed – Nil; Injured – One.

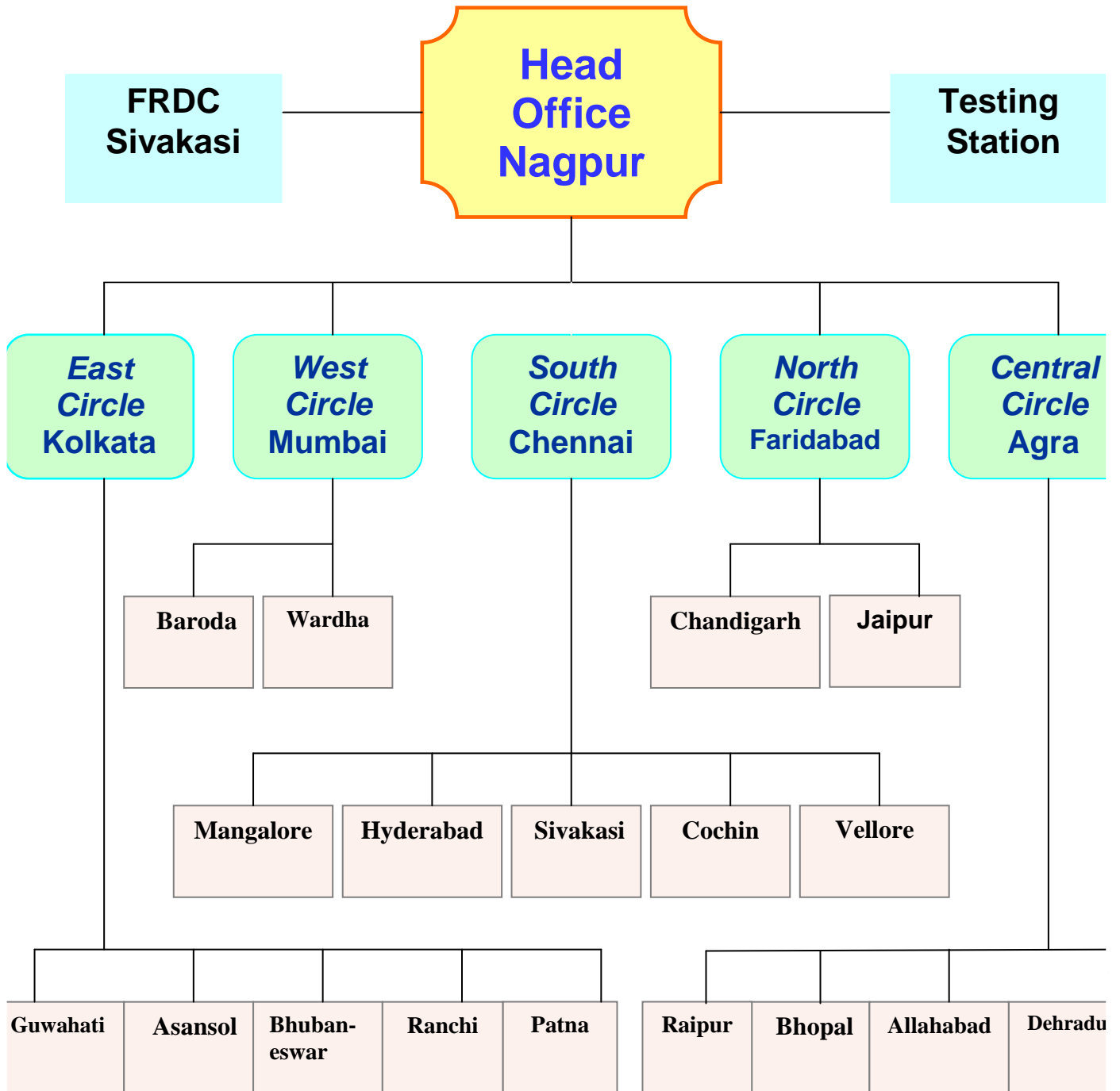
A fire occurred in a service centre of Retail Outlet while emptying out the petrol from the tank of a car which was filled by mistake instead of diesel. The probable cause of the accident was during emptying the fuel tank of the car the petrol spilled on the floor and caught fire from the flash came out from the electric lamp which had fallen on the floor.

Under Gas Cylinder Rules, 2004

1. Date – 09.04.2011 Place – Vedvyas, Rourkela, Sundergarh, Odisha.
Killed – 3; Injured – 2.

An explosion and fire accident occurred at dissolved Acetylene filling and storage premises belongs to M/s. Asiatic Gases Ltd. The probable cause of accident was either the filling of Acetylene in a cylinder having defective porous mass causing the decomposition of the gas and resulting the explosion or the Acetylene could have decomposed due to improper cooling of cylinder causing the explosion or filling the gas above maximum filling pressure resulting in explosion.

**ORGANIZATIONAL SETUP
OF
PETROLEUM AND EXPLOSIVES SAFETY ORGANIZATION (PESO)**



ANNEXURE-II**JURISDICTION OF THE CIRCLE AND SUB-CIRCLE OFFICES OF THE PETROLEUM AND EXPLOSIVES SAFETY ORGANIZATION (PESO)**

Sr. No.	Name of Office/Circle/ Sub-Circle Offices	Address	Jurisdiction	Telephone/Fax No
A	Head Office	E-mail: explosives@explosives.gov.in Web-site: http://peso.gov.in		
01	Nagpur	Chief Controller of Explosives, Petroleum And Explosives Safety Organization Block "A", 5 th Floor, C.G.O. Complex, Seminary Hills, Nagpur 440 006(M.S.)	Whole India	STD Code (0712) 2510103, 2510580 2510459, 2510389 2510579, 2510579, 2512006, 2510072, 2512091, 2510139, 2512093, 2512094, 2511512, 2512257 EPABX No-251024 Fax No. -2510577 Telegram:Explosives
B.	West Circle	E-mail : jtccemumbai@explosives.gov.in		
01	Navi Mumbai	Joint Chief Controller of Explosives, A-1 & A-2 Wing, 5 th Floor, C.G.O. Complex, CBD Belapur, Navi- Mumbai 400614. (M.S.)	Gujrat, Washim, Hingoli, Akola, Parbhani, Maharashtra,Goa, Daman & Diu, Dadra & Nagar Haveli.	STD Code (02) 27564941(D) 27573881 EPABX No 27575946 Fax No.- 27575967 Telegram:INSWES
Sub-Circle Office				
02	Baroda	Dy. Chief Controller of Explosives, 8 th Floor, Yash Kamal Building Opposite MS Unmiversity Sayajgunj, Baroda – 390020	Gujarat	STD Code (0265) 2361035, 2225159 Fax No.- 2225952 Telegram: Explosives
Factory Attached Office				
03	Wardha	Controller of Explosives, C/o.Geetai Nagar, Opposibe Dhuniwale's Math, Nagpur Road, Gopuri, Wardha 442001 (M.S.)	Wardha, Yeotmal, Nanded, Gondia, Chandrapur, Gadchiroli, Bhandara Districts of Maharashtra	STD Code (07152) 245006 Fax No.- 230370
C.	East Circle	E-mail: jtceekolkata@explosives.gov.in		
01	Kolkata	The Joint Chief Controller of Explosives, 8 Explanade East, 1 st Floor, Kolkatta 700069 (W.B.)	West Bengal, Bihar, Orisssa, Assam, Manipur, Tripura, Arunachal Pradesh,	STD Code (033) 22480427, 22486600, 22489524, 22420686

			Meghalaya, Mizoram, Sikkim, Nagaland, Andaman & Nicobar Islands	Fax No.-2243932 Telegram: INSEAST
Sub-Circle Office				
02	Asansol	Dy. Chief Controller of Explosives, 93, S.B. Gorai Road, P.O. Asansol, Dist. Burdwan, 713301 (W. B.)	Districts of Burdwan, Bankura & Purulia (West Bengal)	STD Code (034) 2283967 Fax No.- 2283834 Telegram: Explosives
Sub-Circle Office				
03.	Guwahati	Dy. Chief Controller of Explosives, GNB Road, Near Bhuyan Manson, 4 th Floor, Panchwati, Silpukhuri, Guwahati 781003 (Assam)	Assam, Sikkim, Manipur, Tripura, Nagaland, Arunachal Pradesh, Meghalaya and Mizoram	STD Code (0361) 2662783 Fax No.-2662503 Telegram: Explosives
Sub-Circle Office				
04.	Ranchi	Dy. Chief Controller of Explosives, Sri Mohan Building, 'Sita Compound, 5, main Road, Behind Sushila Automobiles, Ranchi-834001 (Jharkhand)	Jharkhand	STD Code (0651) 2332689, 2332690 Fax No.-2332688 Telegram: Explosives
Sub-Circle Office				
05.	Bhubaneswar	Dy. Chief Controller of Explosives, F-35/A, BJB Nagar, Bhubaneswar-751014 District Khurda, Odisha	Odisha	STD Code (0674) 2433370, 2433390 Fax No.- 2430656 Telegram: Explosives
Sub-Circle Office				
06.	Patna	Controller of Explosives, 1 st Floor, Mahabir Complex, Adarsh Colony, Road No 2, Khemnichauk, P.O. New Jananpura, Patna-800027	Bihar	STD Code (0612) 2390914 Fax No.-2390913 Telegram:
D. South Circle E-mail: jtcechennai@explosives.gov.in				
01.	Chennai	Jt Chief Controller of Explosives, No. 140, Rukhmini Laxmipati Road, Marshalls Road, Egmore, Chennai 600008 (T.N.)	Tamilnadu, Karnataka, Kerala, Andhra Pradesh, Pondichery & the Lakshdive Islands	STD Code (044) Tel:, 28515464, 28419529, 28429945-47, 28515464 Fax No.- 2851484 Telegram: Explosives

Sub-Circle Office				
02.	Ernakulam	Dy. Chief Controller of Explosives, C2, 3 rd Floor, CGO Complex, Opp. CSEZ, Kakkanad, Ernakulam, Kochi-682037 (Kerala)	Kerala and Mahe in the Union Territory of Pondichery	STD Code (0484) Tel.: 2427286 Fax No.2427276 Telegram: Explosives
Sub-Circle Office				
03	Mangalore	Dy. Chief Controller of Explosives, 2 nd Floor, City Centre, Opposite Hotel Roopa, Balmatta Road, Mangalore-575001 (Karnataka)	Karnataka	STD Code (0824) 2420167, 2441588 Fax No.-2423937 Telegram: Explosives
Sub-Circle Office				
04.	Sivakasi	Dy. Chief Controller of Explosives, FRDC, Behind ESI Hospital, Sivakasi West, Sivakasi-626124 (T.N.)	Ramnathapuram, Madurai, Tirunelveli, Thanjaur, Theni Kanyakumari, Virudunagar, Tuticorin, Dindigal, Madurai, Dindigul Anna & Nagapptinam Districts of Tamil Nadu	STD Code (04562) 254353 Fax No.- 255233 Telegram: Explosives
05.	Vellore	Controller of Explosives, D-57, 1 st Floor, Katpadi Road, Gandhi Nagar, Vellore 632006 (TN)	Vellore, Dharmapuri, Thiruvannamalai, Salem, Brode & Coimbatore Districts of T. N.	STD (0416) 2241642 Fax No.- 2242513
Sub-Circle Office				
06.	Hyderabad	Dy. Chief Controller of Explosives, Kendriya Sadan, 1 st Floor, Sultan Bazar, Koti, Hyderabad 500195 (A.P.)	Andhra Pradesh, Yenam in the Union Territory of Pondichery	STD (040) 24600359, 24617863 Fax No. 24617803 Telegram: Explosives
E. Central Circle E-mail: jtceagra@explosives.gov.in				
01.	Agra	Jt Chief Controller of Explosives, 63/4, A-Wing, 2 nd Floor, C.G.O. Complex, Sanjay Palace, Agra- 282 002 (U.P)	Uttar Pradesh and Madhya Pradesh, Uttaranchal and Chattisgarh	STD (056) 2521322 2523244, 2523266 Fax No.- 2527436 Telegram:

				Explosives
Sub-Circle Office				
02.	Allahabad	Dy. Chief Controller of Explosives Sector-1, Bhawan No 66, Lajpat Rai Road, Allahabad - 211001 (U.P)	Allahabad, Ambedkarnagar, Azamgarh, Bahraich, Balarampur, Ballia, Barabanki, Basti Bhadohi, Chandauli, Deoria, Faizabad, Ghazipur, Gonda, Gorakhpur, Hardoi, Jaunpur, Kabirnagar, Kushambi, Lakhimpur, Kheri, Lucknow, Mirzapur, Mau, Mahrajganj, Pratapgarh, Shravasti, Siddharth Nagar, Sitapur, Sonebhadra, Sultanpur, Varanasi Districts of Uttar Pradesh	STD (0532) 2250329, 2441491 Fax No.- 2644964
Sub-Circle Office				
03.	Bhopal	Dy. Chief Controller of Explosives, E-8/23, Basant Kunj, Arera Colony, Bhopal -462039	Madhya Pradesh	STD (0755) 2420775, 2445270 Fax No.- 2429997 Telegram: Explosives
Sub-Circle Office				
04.	Dehradun	Controller of Explosives, 421, Indira Nagar, Near Asian School, Dehradun-248006, Uttarakhand.	Uttarakhand	STD (0135) 2769780 Fax No.-2769794
05.	Raipur	Controller of Explosives, Avanti Vihar Colony, main Road, Near Nala, Raipur-492006. Chhattisgarh	Chhattisgarh	STD (0771) 2442204 Fax No.- 2442204
F. North Circle		E-mail: jtccfaridabad@explosives.gov.in		
01.	Faridabad	Jt Chief Controller of Explosives, Hall No 502 & 507, Level-5, Block-B, Old CGO Complex, NH-4, Faridabad - 121001 (Haryana)	Delhi, Jammu & Kashmir, Himachal Pradesh, Haryana, Punjab & Rajasthan and Union Territory of Chandigarh	STD (0129) 2410730, 2410770 2410732, 241073 2410731, 2421388 Fax No.- 2410733
Sub-Circle Office				

02.	Chandigarh	Dy. Chief Controller of Explosives, Shop cum office building, 1134/1135, Sector 22/B, Chandigarh - 160 002	Punjab, J & K Himachal Pradesh, Chandigarh	STD (0172) 2702586, 2727234 Fax No.- 2725839
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Sub-Circle Office

03..	Jaipur	Dy. Chief Controller of Explosives, Amrapali Road, Near Power House, Vaishali Nagar, Jaipur 302021 (Raj.)	Rajasthan	STD (0141) 2356731, 2356781 Fax No.- 2350279
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G. Testing Station

01.	Gondkhairy	Dy. Chief Controller of Explosives, Departmental Testing Station, 18 K.M. Stone, Amravati Road, Post Gondkhairy, Via Wadi, District:Nagpur-440023(M.S)	Nagpur, Amravati	STD (07104) 280374, 280305 Fax No.- 280565
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H. FRDC

01.	Sivakasi (FRDC)	Fireworks Research and Development Center Anaiyoor Village, Sivakasi West, District Virudhunagar -626124	-	STD (04562) 254402, Fax No.- 254404
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I.	Pay & Accounts Office			
01.	Nagpur	Pay & Accounts Officer, C.G.O. Complex, Block "C", 1 st Floor, Seminary Hills, Nagpur 440 006 (M.S.)	-	STD (0712) 2510819 Fax No.- 2510819

**SANCTIONED STRENGTH OF OFFICERS & STAFF
OF THE ORGANIZATION**

		HO	DTS	FRDC	CHEN	KOL	FBD	Agra	MUM	Sub Circle offices	TOTAL
Sl.	Name of the post										
1	Chief Controller of Explosives	1	0	0	0	0	0	0	0	0	1
2	Jt. Chief Controller of Explosives	2	0	0	1	1	1	1	1	0	7
3	Dy. Chief Controller of Explosives	4	0	1	1	1	1	1	1	13	23
4	Controller of Explosives	6	1	1	5	4	4	4	5	16	46
5	Dy. Controller of Explosives	2	1	2	7	6	3	4	6	29	60
6	Accounts Officer	1	0	0	0	0	0	0	0	0	1
7	Administrative Officer	1	0	0	0	0	0	0	0	0	1
8	Private Secretary	1	0	0	0	0	0	0	0	0	1
9	Hindi Officer	1	0	0	0	0	0	0	0	0	1
10	Senior Technical Assistant	0	3	2	0	0	0	0	0	0	5
11	Senior Hindi Translator	1	0	0	0	0	0	0	0	0	1
12	Steno - I	4	0	0	1	1	1	1	2	0	10
13	Superintendent	4	0	0	3	3	3	3	3	0	19
14	Assistant	9	1	0	2	2	3	2	2	13	34
15	Lib. Assistant	1	0	0	0	0	0	0	0	0	1
16	Accountant	1	0	0	1	1	1	1	1	0	6
17	Upper Division Clerk	12	2	1	9	8	4	5	9	21	71
18	Lower Division Clerk	18	1	1	5	3	3	4	4	19	58
19	Steno-II	2	1	0	1	1	1	1	1	13	21
20	Steno-III	1	0	1	2	1	1	1	1	13	21
21	Jr. Technical Assistant	0	4	2	0	0	0	0	0	0	6
22	Jr. Hindi Translator	0	0	0	1	1	1	1	1	0	5
23	Driver	2	1	1	1	1	1	1	1	13	22
24	MTS/ Group D	10	5	4	5	5	4	5	5	16	59
	TOTAL A+B & C	84	20	16	45	39	32	35	43	166	480

ANNEXURE-IV**PRODUCTION OF EXPLOSIVES DURING THE YEAR 2011-2012**

Sr No.	Explosives	Class	Quantity Kgs/Mtrs/Nos.
1	Gun Powder	1 Div. 0	710672.960
2	Nitrate Mixture	2 Div.	238193072.030
3	SME	2 Div.	483820917.765
4	PETN+Cast Booster	3 Div.2	5062981.465
5	Safety Fuse	6 Div. 1	81112815.000
6	Detonator Fuse	6 Div. 2	370617904.000
7	Safety Cartridge	6 Div. 2	18567.214
8	Fuse Heads	6 Div. 2	206806896.000
9	Detonator	6 Div. 3	970709845.000
10	Micro Cord	7 Div. 3	175700.000

IMPORT & EXPORT OF EXPLOSIVES

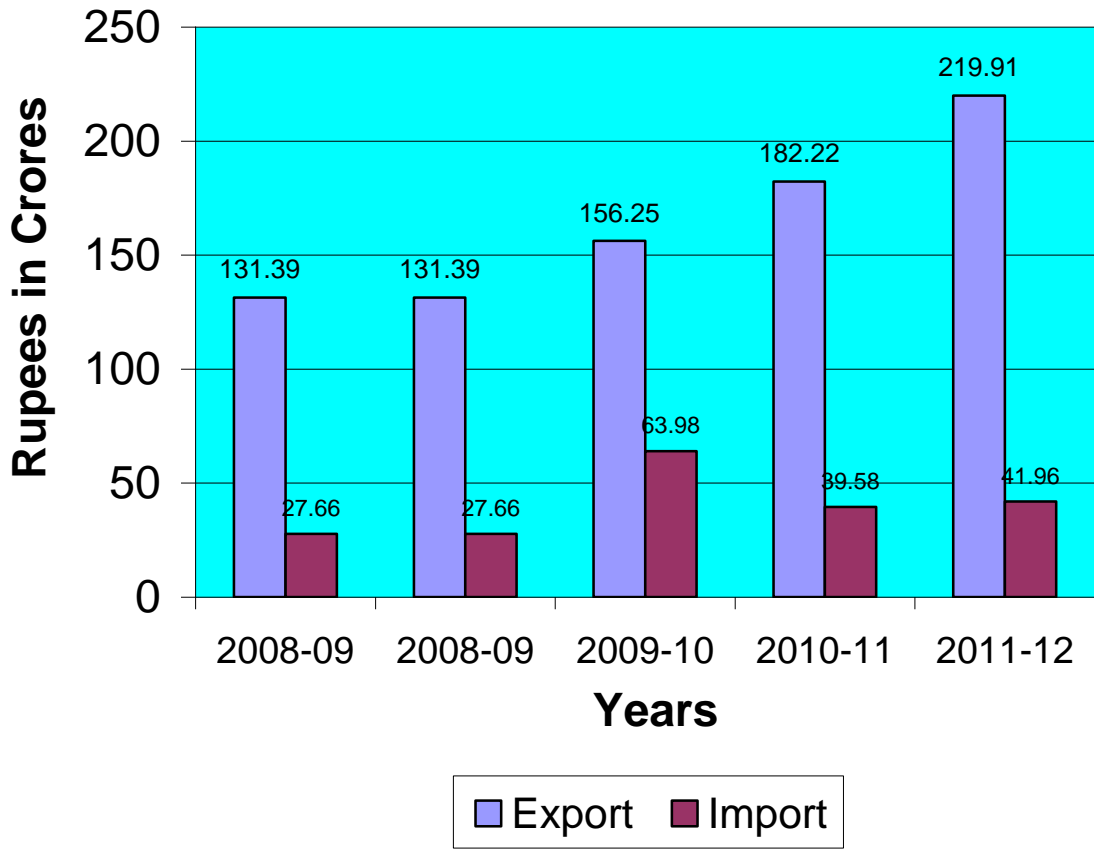
IMPORT:

During the year 2011-2012, 181 number of licenses were issued for importation of short delay detonators and specific type of explosives for use in exploration by Oil India Ltd., Cairn Energy India Ltd., BG Exploration & Production India Ltd., HLS Asia Ltd., Oil & Natural Gas Corporation Limited, Niko Resources Limited, Reliance Industries Limited, GeoEnpro Petroleum Limited, Great Eastern Energy Corporation Limited, Joshi Technologies International Inc., Schlumberger Asia Services Limited, Gujarat State Petroleum Corporation Limited, Electronics Corporation of India Limited, Indian Explosives Limited, Rajasthan Explosives & Chemicals Limited, Ideal Detonators Pvt. Ltd., Selan Exploration Technology Ltd., Focus Energy Ltd., Premier Explosives Ltd., OAO “Gasprom”, Premier Oil (North East India) BV, Essar Oil Ltd., and Marine Safety Products, A. S. Moloobhoy & Sons, SHM Shipcare for shipping signals (Pyrotechnics) and Srijan Systems Pvt. Ltd., for pyrotechnics scare cartridges (Anti Bird Devices) by use of Airports Authority of India and Air Force Stations. The value of explosives imported was Rs. 41.96 Crores.

EXPORTS:

During the year 2011-12, 351 nos. of licenses were granted for exportation of explosives and value of explosives exported was worth Rs. 219.91 Crores.

Export & Import of Explosives During Last Five Years



DESTRUCTION OF EXPLOSIVES DURING THE YEAR 2011-2012

Class-1	3601.44
Class-2	87698.035
Class-3 Dvi.2	262
Class 6 Div.1	170204.58
Class 6 Div.2	70548.42
Class 6 Div.3	1452120
Class 7 Div.2	141294.395

**PRODUCTION, IMPORT & EXPORT OF GAS CYLINDERS,
VALVES & REGULATORS****GAS CYLINDER & VALVES :**

A Comparative statement of production of Cylinders, Valves & Regulators During 2009-2010, 2010-2011, 2011-2012 is given below.

Sr. No.	Items Manufactured	Nos. Manufactured During		
		2009-10	2010-11	2011-12
01.	Welded load Carbon steel Gas Cylinders For			
	a. LPG	1,03,82,622	1,02,36,540	1,01,20,400
	b. Dissolved Acetylene Gas	9,490	7,330	6,750
	c. Other low pressure Liquefiable Gas	5,64,803	5,30,200	3,35,650
	Total (a + b + c)	1,09,56,915	1,07,74,074	1,04,62,800
02.	Welded Large Containers for low pressure Liquefiable Gas	50,291	40,450	37,740
03.	Seamless Steel Cylinders for Permanent & high pressure Liquefiable Gas	8,59,233	10,11,958	7,58,856
04.	Valve for :			
	a. LPG Cylinders	2,02,38,717	1,70,15,200	1,75,13,390
	b. Other Gas Cylinders.	34,08,842	20,12,210	16,20,710
	Total (a + b)	2,36,47,559	1,90,27,410	1,91,34,100
05.	Low Pressure LPG Regulators.	74,90,626	55,80,000	57,70,000

IMPORT OF CYLINDERS:

A numbers of high purity permanent gases & gas mixtures are required to be imported duly filled in cylinders to meet the requirements of Trade & Industry. It is, therefore, becomes necessary to allow import of large numbers of cylinders from various Countries. During the year 2011-12, 755 licenses were granted to cover importation of 41,230 cylinders filled with various gases/ gas mixtures & 1,75,340 numbers empty Cylinders for filling with compressed gases including empty CNG cylinders for automobiles use.

EXPORT OF CYLINDERS:

A total of 7,85,916 number filled cylinders were exported during the year 2011-12 earning Foreign exchange of Rs. 2,29,03,17,124/-.

EXPORT OF VALVES & LPG REGULATORS :

A total of 2,25,220 numbers of valves & 1,80,400 numbers of LPG Regulators were exported during the year 2011-2012 earning Foreign exchange of Rs. 82,70,340/- & Rs.35,40,380/- respectively.

EXPORT OF COMPRESSED GAS FILLED IN CYLINDERS:

During the year 6254 empty cylinders/containers were imported & re- exported duly filled with gas, earning foreign exchange equivalent to approximately 32 Crores.

GAS FILLING PLANTS:

There are 1903 gas filling plants licensed by this Organization in the country for filling of cylinders with various compressed gases as on 31.03.2012.

ANNEXURE-VIII

LIST OF MANUFACTURERS OF VALVES (Approved during 01.04.2011 to 31.03.2012)

Sr	Name and address of the Company	Gas Service
1.	M/s Primly Enterprises	O ₂ & LPG
2.	M/s Indo Fab Metro Engineers	Industrial Gas
3.	M/s Benzo Triana	CO ₂ & O ₂
4.	M/s N.K. Auto Electricals India (P) Ltd.	LPG
5.	M/s Gopal Cylinder Unit III	LPG
6.	M/s Astron Valvetech Pvt. Ltd	LPG
7.	M/s Daya Industries	LPG
8.	M/s U.P. Telelinks Ltd.	LPG
9.	M/s Perfect Products	Multi Function Valve
10	M/s Sahuwala Auto Forge & Engineering (P) Ltd.	Multi Function Valve

ANNEXURE-IX

LIST OF MANUFACTURERS OF LPG CYLINDERS (Approved during 01.04.2011 to 31.03.2012)

Sr. No.	Name and address of the Company
1.	M/s Raghupati Synergy Pvt. Ltd., 431-432A, Samnapalli Road, Alur Village, SIPCOT, Phase II, HOSUR- 635 109 (Tamilnadu)
2.	M/s Raghupati Synergy Pvt. Ltd., Unit II, 431-432A, Samnapalli Road, Alur Village, SIPCOT, Phase II, HOSUR- 635 109 (Tamilnadu)
3.	M/s Dharmaja Cylinders Private Limited, 7-1-212/9, Sivabagh, Ameerpeth, HYDERABAD – 500 016
4.	M/s Tirupati Cylinders Limited, Unit II Village Bhandura, 9th K.M. Bhopa Road, MUZAFFARNAGAR – 251 001 (U.P.)
5.	M/s R.M. Cylinders Private Limited, Unit II, 404 Vinayaka Apartments, Dr. Bhoomanna Lane, Barkatpura, HYDERABAD – 500 029
6.	M/s. Indo Cylinders, S.No. 70/2A & B, 70/3 & 70/4, Budihal Village, Nelamangala Taluk, Bangalore Rural Dist. 262 123
7.	M/s Bihar Cylinder, Bypass Road, Mokama, Distt. Patna (Bihar)
8.	M/s. Sai Cylinders Private Limited, Plot No. 1052, Sundernagar, Tatanagar, Village Purihasa, Dist. East Singhbhum, JAMSHEDPUR - 832 107 (Jharkhand)
9.	M/s Asian Pressure Vessels, S.C.F. 28, Sector-22D, CHANDIGARH

LIST OF MANUFACTURERS OF LPG REGULATORS (Approved during 01.04.2011 to 31.03.2012)

Sr. No.	Name and address of the Company
1.	M/s. M.S.Enterprises, 46-B, Mohkampur Industrial Estate, Phase-1, Delhi Road, MEERUT (U.P.)
2.	M/s. RAGHAV DIE CASTING, C-597, Gali No. 12, Majlis Park, Azadpur,

	DELHI – 110 033
3.	M/s. Harsh Enterprises, Plot No. E-804, 22 Feet Road, Dabua Colony, N.I.T. FARIDABAD

ANNEXURE-X

LIST OF MANUFACTURERS OF AUTO LPG CONTAINERS

(Approved during 01.04.2011 to 31.03.2012)

Sr. No.	Name and address of the Company
1.	M/s R.M. Cylinders Private Limited, Unit II 404 Vinayaka Apartments, Dr. Bhoomanna Lane, Barkatpura, <u>HYDERABAD</u> – 500 029

LIST OF MANUFACTURERS OF VALVE

(Approved during 01.04.2011 to 31.03.2012)

Sr. No.	Name and address of the Company
1.	M/s. Indofab Metpro Engineers LLP, Sy. No. 112, Village Dommarpochampally, Qutubullapur (M), Mandal, District Rangareddy (A.P.)
2	M/s. Vidarbha Gas Vessels Pvt. Ltd., T-43, MIDC, Hingna Road, <u>NAGPUR</u> – 440 016
3	M/s. Prabha Electronics Pvt. Ltd., 209, Industrial Area, Phase – I, <u>CHANDIGARH</u> - 160 002
4	M/s. BENZO TRIANA, A-62, Sector 5, NOIDA (U.P.)
5	M/s. Primly Enterprises, Plot No. 143, 16/5, Karkhana Bagh, Old Faridabad, HARYANA – 121 002

LIST OF APPROVED PRESSURE VESSEL FABRICATOR

(Approved during 01.04.2011 to 31.03.2012)

Sr. No.	Name and address of the Company
1.	M/s Cimmco Ltd Bharatpur, Rajasthan
2	M/s Pressure Vessel (India) Chakan, Taluka Khed, District Pune
3	M/s Eureka Engineering Works Shampur, Shibtda, Howrah
4	M/s Heat Max Engineering Co, Bahadurgarh, Jhajjar, Haryana
5	M/s Spark Engineers (Unit II) Bhosari, Pune
6	M/s Modern Industries GT Road, Sahibabad, Ghaziabad
7	M/s Surya Shakti Vessels Pvt. Ltd., Asoati Railway Station Road, Ballabgarh, Faridabad
8	M/s IOT Anwehsa engineering & Constraction Limited Opposite GEB sub Station, Vadodara
9	M/s Vijay Tanks & Vessels Limited Ghandhidham, Kutch Gujarat
10	M/s Janta Engineering & Co., 136, Saran Village, Ralab Road, NIT Road, Faridabad
11	M/s Altech Infrastructure (India) P Ltd., Chopanke, Alwer, Rajasthan
12	M/s Cryolor Asio Pacific P Ltd., GST Highway, Kadaimalaiputtur, Thozhupedu PO, Madurantakam Taluka, District Kachipuram, Tamil Nadu
13	M/s Eureka Fabricators P Ltd Anand Nagar, Ambernath, Thane

ANNEXURE – XII

SME/ANFO Licence Granted During 01/04/2011 to 31/03/2012

Sr. No.	Name of Company	Licence NO.	Grant Date
1	M/s Binani Cement Limited	E/HQ/RJ/SM7 (E62133) ANFO	06/09/2011
2	M/s Regenesi Industries Pvt. Ltd	E/HQ/AP/SM/17(E62562) SME	12/09/2011
3	M/s Rungta Mines Limited	E/HQ/OR/SM/14(E53953) ANFO	14/11/2011
4	M/s Navbharat Fuse Co. Ltd.	E/HQ/JH/SM/16(E51810) SME	05/01/2012
5	M/s Solar Industries India Ltd.	E/HQ/MH/SM/13(E66359) SME	27/03/2012
6	M/s Bharathi Cement Corporation Ltd	E/HQ/AP/SM/18(E54470) ANFO	29/03/2012

TESTING OF PETROLEUM VESSELS IN 2011-2012

The Officers of the Organization issued **2998** gas free certificates during the year 2011-2012 after testing oil tanks pump rooms etc. of petroleum tankers/vessels at Mumbai, Alang (Gujarat), Kolkata, Visakhapatnam, Mangalore, Chennai and Cochin ports.

Though tankers due for breaking by dismantling and cutting in Ship Breaking Yards are not petroleum carrying vessels, the Organization considering the hazards associated and safety of workers involved, has been extending its services for examination and testing such vessels for their gas free conditions for the purpose of Dock Entry and Man Entry and hot work. This has helped the ship breaking industry to grow and develop as the second largest such industry in the world.

COURT ATTENDANCE:

During the year 2011-12, officers of the Organization attended law courts on **42** occasions for tendering expert technical evidence in cases of prosecution under various sections of the Explosives Act 1884 and the Explosives Substance Act 1908.

WORKING OF REFINERIES FOR THE PERIOD OF 01.04.2011 to 31.03.2012

Sl. No.	Name of Refinery	Crude Oil Processed	Installed capacity	LPG Produced	LPG Marketed	No. of Accident	EXPORT	
		MMT	MMT	MMT	MMT		Quantity (in MMT)	Value (in Crores)
1.	IOCL, Digboi	0.651006	0.650000	0.008986	0.008986	Nil	Nil	Nil
2.	IOCL, Panipat	1.365871	1.500000	0.584522	Nil	Nil	Nil	Nil
3.	IOCL, Guwahati	1.117540	1.000000	0.048531	0.048015	1	Nil	Nil
4.	IOCL, Barauni	6.207406	6.000000	0.3404681	0.3387801	1	0.94923145	3516.362
5.	IOCL, Haldia	6.878000	7.500000	0.181611	0.182065	Nil	0.488942	1189.53
6.	IOCL, Vadodara	13.561068	13.700000	0.420536	0.420616	Nil	1.073486	3700.58
7.	M/s. IOCL, Mathura	8.880000	8.000000	0.303940	0.304825	1	Nil	Nil
8.	IOCL, Bongaigaon	2.008295	2.350000	0.044653	0.044653	Nil	0.135939	535
9.	HPCL, Mumbai	6.554	6.500	0.2538	0.2234	Nil	0.41124	1395.38
10.	HPCL, Visakh	8.1996	8.300	0.2812	0.2795	2	0.797724	2396.55
11.	BPCL, Mumbai	13.020000	12.000000	0.512	0.512	Nil	1.83	6232
12.	Essar Oil Ltd.	14.755609	10.500000	0.601227	0.595928	Nil	13.990	Nil
13.	BPCL Kochi Refinery	8.698313	9.500000	0.469665	0.466022	Nil	0.722414	2059.58
14.	CPCLtd., Cauvery Basin Refinery	0.00070330	1.000000	0.022763	0.022924	Nil	0.034692	103.3
15.	Chennai Refinery	10.044560	10.500000	0.365669	0.364820	8 (2+6)	1.154333	3105.4
16.	Numaligarh Refinery Ltd., Assam	2.250225	3.000000	0.041887	0.042342	Nil	Nil	Nil
17.	RIL Jamnagar SEZ Refinery Division	35.573	33.24	2.064	2.064	Nil	29.849	101503
18.	DTA Refinery Division	31.047	37.82	0.607	0.607	Nil	13.204	41.972
19.	MRPLtd.	12.639	11.82	0.300	0.298	Nil	4.315	Nil
20.	Bharat Oman Refinery	2.02	6.0	0.05	-	-	-	-
	Total	185.471	190.88	7.502	7.163	13	68.956	125778.654

Total installed capacity = 190.88 MMT

Total LPG produced = 7.502 MMT

Total Crude oil processed = 185.471 MMT

Total LPG marketed = 7.163 MMT