

Environmental Impact Assessment

Executive Summary

Extension of Runway at 24 Beginning, Expansion of Apron Suitable for C type of Aircraft and Other Associated Works at Swami Vivekananda Airport at Raipur (Chhattisgarh)



Airports Authority of India

Swami Vivekananda Airport, Raipur - 492015,



NABET Accredited Environmental Consultant



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EXECUTIVE SUMMARY

0.1 Introduction

Swami Vivekananda Airport at Raipur is the operational airport in Chhattisgarh State, belonging to Airports Authority of India. Presently, the Airport is having runway 06/24 of dimension 2286 m x 45 m, with PCN 50/F/B./W/T suitable for A-320 type of aircraft.

There is a demand from Airlines to extend the Runway by at least 900 ft (274.32 m) and if possible to 11000 ft (3352.80 m) to facilitate international operations. Also, due to increase in number of flights and close schedule especially in morning peak hours, the available capacity of 4 parking bays on the new apron, falls short of requirement sometimes. Accordingly, keeping in view the current and future requirement due to construction of new terminal building recently, it has been decided by the AAI to upgrade runway 06/24 by 965m (3166ft)×45m (150ft) towards runway 24 beginning, as per enclosed drawing (Annexure), to make the operational runway dimension 3251 m (10066 ft) ×45m (150ft) with PCN suitable for B-737-900/A-321-200 type of aircraft and expand the apron (81m x 88.5m) apart from carrying out other associated development works.

The proposed runway extension, expansion of apron and associated works at Raipur Airport is designated development under EIA Notification 2006 and requires prior environmental clearance from Ministry of Environment, Forests & Climate Change (MoEF&CC). During 148th meeting of the Expert Appraisal Committee of Ministry of Environment, Forest and Climate Change (MoEF&CC) for Building/Construction Projects/Township and Area Development Projects, Coastal Regulation Zone, Infrastructure Development & Miscellaneous projects held on held on 19th - 21st May, 2015, the project was considered and TOR was approved vide letter No. 10-6/2015/IA-III dated 18 June, 2015. The EIA & EMP report has been prepared as per TOR approved by MoEF&CC.

0.2 Project Description

0.2.1 Justification of Proposed Extension

Swami Vivekananda Airport at Raipur is the operational airport in Chhattisgarh State, belonging to Airports Authority of India. Presently, the Airport is having runway 06/24 of dimension 2286 m x 45 m (7500 ft x 150 ft) with PCN 50/F/B./W/T, suitable for A-

320 type of aircraft. The runway 06 threshold is displaced by 130 m due to localizer building falling in approach funnel. The available length for 06 approach is 2186 m resulting in operation of aircraft under load penalty. There is a demand from Airlines to extend the runway by at least 900 ft (274.32 m) and if possible to 11000 ft (3352.80 m) to facilitate International operations. Also, due to increase in number of flights and close schedule especially in morning peak hours, the available capacity of 4 parking bays on the new apron, falls short of requirement sometimes. Accordingly, keeping in view the current and future requirement due to construction of new terminal building recently, it has been decided by the AAI to upgrade Runway 06/24 by 965m (3166ft)×45m (150ft) towards runway 24 beginning, as per enclosed drawing (Annexure), to make the operational runway dimension 3251 m (10066 ft) ×45m (150ft) with PCN suitable for B-737-900/A-321-200 type of aircraft and expand the apron (81m x 88.5m) apart from carrying out other associated development works.

0.2.2 Scope of Extension and Expansion

The total area of the existing airport is 287.648 ha. The airport is located near Mana and Barauda village, 12 km south of Raipur city between the old city and Naya Raipur. The geographical coordinates of the airport are 21° 10' 49.15" North and 81° 44' 24.99" East. The proposed extension at Swami Vivekananda Airport at Raipur will include following:

Runway 06/24 to be extended by 965m (3166ft)×45m (150ft) towards runway 24 beginning, to make the operational runway dimension 3251 m (10066 ft) ×45m (150ft) with PCN suitable for B-737-900/A-321-200 type of aircrafts.

- a) Removal of obstructions and structures in the area of extension of Runway, basic strip and approach funnel.
- b) Provision of runway shoulders 7.5m wide on either side of extended runway.
- c) Provision of turn pad for Code letter 'Cat-4C' type of aircraft as per annex-14 and DGCA CAR.
- d) Appropriate slope of runway, apron, RESA and levelling, grading, development of runway strip shall be given and DGCA CAR to facilitate draining of rain water into drainage system.
- e) Provision of RESA of 240 m × 90 m dimension at both the ends of runway as per planning of rain water into drainage system.
- f) Declaration of PCN values of the runway and standard runway markings.
- g) Provision and extension of boundary wall to ensure that both new and old boundary walls constructions are commensurate with BCAS norms. Provision of perimeter

road, along with lighting and CISF watch tower, inside the boundary as per the current norms.

- h) Construction of box culverts of strength to withstand Code-4C type of aircraft operations in case such culverts are needed as per site requirement for drainage purpose of cable crossing.
- i) Provision of cable crossing with RCC hume pipes of required size and class at suitable location at proposed extension of runway.

Expansion of Apron, as below

1. Expansion of apron on east side by 81 m × 88.5 m to park two additional Code '4C' type of aircraft i.e. A321-200/B737-900.
2. Both the taxiways of the existing new apron; and proposed apron, will have strength for A-321-200 type of aircraft as per DGCA/ICAO norms.
3. Dismantling of existing shoulder on north side of existing apron.
4. Provision of 3.5m wide shoulder.
5. Provision of GSE and appropriate hard stand area of 2900 sqm.
6. Isolation bay to be suitable for A-321-200 type of aircraft.
7. Diversion of service, if any, like water line, electrical and other cable etc.
8. Provision of standard marking and mandatory instruction signage's to be provided as per Annex-14 and DGCA CAR.
9. Provision of apron mast flood lights at appropriate location and shifting/provision of apron/taxiway edge lighting. This will require additional power.
10. Provision for drainage of rain water.
11. Existing drain to be appropriately diverted along proposed boundary wall on western side of the apron.

All the works will be carried out as per aerodrome design manual Part II, ICAO SARPs, and DGCA CARs. For proposed extension 128.662 ha land will be required and the same has been acquired by Naya Raipur Development Authority (NRDA) and handed over to Airports Authority of India.

0.2.3 Land Required for Proposed Extension

The total area of the existing airport is 287.648 ha and additional land is 128.662 ha which has been acquired by NRDA (Naya Raipur Development Authority) and handed over to AAI (Airport Authority of India) for proposed extension.

0.2.4 Filling Required for Proposed Extension

Ground elevation at existing runway and proposed extension of runway of Swami Vivekananda Airport varies from 304.4 m to 317.5 m above mean sea level (amsl). For leveling of land for proposed extension of runway and associated development, approx 7 Lakhs cum earth filling will be required and same shall be obtained from Godhi village/Arang at distance of about 25 km from the airport.

0.2.5 Utilities

Central Air Conditioning and MBS

At the existing airport, three water based screw chillers of 300 TR capacity each have been installed to meet the central air conditioning requirement. Building Management System (BMS) has been adopted at the airport.

Power Requirements

Total power requirement is estimated as 1500 kW which is met through Chhattisgarh State Electricity Board (CSEB) power supply. For the power back-up, 4 DG sets of 750 KVA capacity each and two DG sets of 320 kVA capacity each have been installed at the airport, which are operated in the event of grid power failure.

Total Water Requirement

Total water requirement for the Swami Vivekananda Airport is estimated as 430 kld, which includes 100 kld water for HVAC, 50 kld for CFT and 280 kld for domestic purposes. Water requirement is met through tube wells already available at the Swami Vivekananda Airport.

Sewage Treatment and Disposal

At the existing airport, Moving Bed Biofilm Reactor (MBBR) type sewage treatment plant (STP) of 200 kld capacity has been installed to treat the sewage generated from the airport. Treated waste water from STP is utilised for landscaping and green belt development.

Rain Water Harvesting

Rainwater harvesting system has been provided at the Swami Vivekananda Airport. For recharge of rain water, artificial pond covering 3600 sqm area for 10000 cum rain water has been provided at the Swami Vivekananda Airport.

Parking Facilities at Airport

The passenger capacity of terminal building is 500 domestic passengers and 200 international passengers. The parking facilities have been provided for 28 VIP cars, general parking for 350 cars, 150 two wheelers and 10 buses.

0.3 DESCRIPTION OF ENVIRONMENT

Topography and Physiography: The topography of the study area is plain, mostly landform of pediment with upper level and lower level structural plateau of Chhattisgarh plain. The average elevation of the study area is 318 m above mean sea level.

Geology: Considerable portion of study area consist of fine grained grey gneisses and coarse porphyritic granites. The granites pass locally into syenites and the usual constituents are pink, white & greenish feldspars, quartz, small ragged crystals of horn blends and brown mica. Literite is reported in small isolated spreads over the shales of the Raipur at a few places. The area is underlain mainly by two distinct geological formations ranging in age from Achaean to recent. The crystalline rocks occupy major parts of the district comprising of granite, granite gneiss, phyllite, and schist. Granites and phyllites intruded by quartz veins form the basement of the basin.

Soil Characteristics: Soil of the area are moderately to deep, calcareous, clayey soil on very gently sloping plain with moderate erosion associated with slightly deep, moderately well drained, clayey soil on very gently sloping with moderate erosion.

Water Resources: Natural drainage channels and nallahs flowing across in the study area. The general slope of the area with local variations is towards the north. There is no perennial river within the study area. Natural drainage channels and nallahs carry run-off during rain.

Water Quality: Water quality of the study area meets desirable limit. Ground water resources in the study area were found fit for drinking purpose.

Micro Meteorology: December is the coldest month with the daily minimum temperature at 13.2°C and the daily maximum temperature at 42.0°C. Temperatures drop appreciably with the onset of the monsoon after the first week of July. The monsoon period is generally pleasant. With the withdrawal of the monsoon by the end of September, day temperatures rise a little in October and both day and night temperatures begin to drop rapidly by November. During the southwest monsoon the humidity is high and is about 87% in the mornings. Summer is the driest part of the year, the humidity being 23-24% in the afternoons.

At Raipur IMD station, annual average wind speed is 6.9 kmph. Highest average monthly wind speed is observed to be in June (10.9 kmph) while lowest (3.2 kmph) in December month.

Ambient Air Quality: Ambient air quality monitoring have been carried out at six locations during post monsoon season for PM_{2.5}, PM₁₀, SO₂, NO₂, NH₃, O₃, C₆H₆, BaP, Pb, As, Ni and CO. National ambient air quality standards for industrial, residential, rural & other areas are met for all monitored parameters at all AAQM locations during post monsoon season.

Noise Level: Noise measurements were carried out at 6 locations. Measured day and time Leq noise levels are within the limit stipulated noise standards.

Natural Hazards and Disaster Risk: The project site is located to seismically low region. The project site is situated in the zone II of the seismic map of India and therefore has a low risk of potential damage due to earthquake. No report of significance earth quake shocks in the area is available.

Terrestrial Ecology: The airport is located Deccan bio-geographical area and region houses an important part of the rich and unique biological diversity. There is no forest area within 10 km from the airport. The 10 km radius area comprise mostly urban and semi urban area, therefore vegetation is mainly social forestry plantations, plantation in the crops fields and building premises, built up area, parks etc. The social forestry plantations comprise Eucalyptus, Neem, Peepal, Babul, Khair, Jamun, Siras, Mahua, Palash, Sisham, etc are observed. Acacia species are seen principally in the agricultural fields and open waste land.

Wild Fauna: The information collected from field survey, local people and supplemented by secondary data from Forest Department, wildlife within 10 km radius area is rare due to anthropogenic activities in the study area.

Rare, Endangered and Threatened

Within 10 km radius area, no species of flora and fauna has been categorized as rare, endangered and threatened (RET) species.

Socio-Economic Environment of Study Area: As per 2011 Census, in the settlements located in the study area, there are total 255304 households as per census records 2011.

Population - As per census records, the population of settlements in the study area is 1208639. The male population constituted nearly 51.26% persons while the female population is 48.74% of the total population.

Sex Ratio - As per census records, sex ratio is defined as the number of females per 1000 males. As per census records, sex ratio in settlements located in the study area are 951.

Schedule Caste - In the study area, scheduled castes population of 14.83%, 14.55% amongst males and 15.13% amongst females.

Schedule Tribe - In the study area, scheduled tribes population is 4.41%, 4.39% amongst males and 4.42% amongst females of the total population of the area.

Literacy - As per the census records, in the study area, 73.19% is literate, 78.14% amongst males and 67.98% amongst females.

Employment Pattern - The employment pattern in the area is an indicator of number of persons employed in various sectors. It also indicates the various categories of employment flourishing in the area. In the study area, total main workers account for 33.13% (50.51% males and 14.85% females) whereas non-workers account for 63.11% (45.52% males and 81.60% females). Marginal workers are 3.76% (3.96% males and 3.55% females). Out of total main workers in the study area, other workers are 92.15% followed by Agricultural labourers account (4.86%) and cultivators (2.99%).

4.0 Anticipated Environmental Impacts & Mitigation Measures

Topography & Physiography : Topography of the area is plain. As per contour plan, ground elevation at existing runway and proposed extension of runway of Swami Vivekananda Airport varies from 304.4 m to 317.5 m above mean sea level (amsl). For extension of runway filling and leveling of land will be required. It is estimated that for proposed extension of runway and associated development, approx 7 Lakhs cum earth filling will be required and same shall be obtained from Godhi village/Arang at distance of about 25 km from the airport from legally approved earth supplier. It is evident that the impact on the topography will be confined to limited to the project site for extension of runway by 965 m x 45 m, which is very small as compared to the total study area.

Mitigation Measures

- Land clearing at the site will be kept to the absolute minimum practicable; and
- Construction site would be designed to minimize filling of the earths.
- Borrowing of earth will be obtained only from approved borrow area in Godhi village/Arang.
- Borrow area will be rehabilitated after borrowing of necessary earth.

Land Use Pattern: The proposed extension of runway, expansion of apron suitable for C type of Aircraft and other associated works at Raipur airport require 128.662 ha land, which has been acquired by Naya Raipur Development Authority (NRDA), Government of Chhattisgarh and has been handed over to Airports Authority of India for proposed extension of runway and associated works. The land use pattern of the 128.662 ha proposed for extension of the Raipur airport will be changed permanently, however this impact will be localized.

Mitigation Measures

- Land clearing for construction site will be kept to the absolutely minimum practicable;
- The filling of soil at the proposed site for extension of runway would be kept minimum; and
- Construction debris and waste generated during construction activities will be collected and disposed in environmental sound manner as per applicable rules depending upon type of wastes.

Water Resources: Total water requirement for the Swami Vivekananda Airport is estimated as 430 kld, which includes 100 kld water for HVAC, 50 kld for CFT and 280 kld for domestic purposes, which remain same after extension of runway & apron and associated activities. Waste water generated from airport is treated in Sewage Treatment Plant (STP) and reused for greenery purposed. After extension of runway water requirement will be almost same.

Mitigation Measures

- Continuous efforts will be made to reduce water consumption using less water required cisterns ;
- Efforts will be made to stop wastage and leakage of water;
- Provision of rain water harvesting through rain water collection tanks.

Water Quality: Total estimated wastewater generation during the operation phase is 180 kld (maximum), which is treated in Sewage Treatment Plant (STP). After treatment, treated wastewater is reused for landscaping and green belt purpose. No wastewater will be discharged outside the airport premises.

Mitigation Measures

- Collection and treatment of waste water in Sewage Treatment Plant (STP);
- Avoid spillage of fuel and lube oil and storing them on concrete floor.
- Solid waste collection and disposal as per Municipal Solid Waste (Management and Handling) Rules 2000.
- Regular testing and analysis of treated waste water from STP to ensure effectiveness of STP and compliance of discharge standards.

Soil: Approx 150 kg per day solid waste is generated during operation at existing airport, which is collected, segregated and managed by external agency for disposal as per Municipal Solid Waste (Management and Handling) Rules, 2000. Hence, the impact on the soil will be insignificant as an organized solid waste collection and disposal practices exist at the Raipur airport.

Mitigation Measures

- Municipal waste collection bins have been placed at strategic locations in the airport;

- External Agency has been hired for disposal of solid wastes as per the provisions of the Municipal Solid Waste (Management and Handling) Rules, 2000;
- Solid waste generated from the airport is transported in close containers;
- Used lubricating waste oil and oil contaminated clothes etc are collected separately in containers and is sold to authorized recyclers as per CPCB/CECB guidelines.

Ambient Air Quality: During the operational phase of the existing Raipur airport and after extension of runway and apron, the intermittent air emissions are generated from aircraft engines during approach, landing, taxiing, take-off and initial climb, which is termed as reference Landing and Take-off Cycle (LTO cycle). The air pollutants of concern from the aircrafts emissions are Sulphur Dioxide, un-burnt hydrocarbons (HC), Carbon Monoxide (CO) and Nitrogen Oxide (NO_x) as per ICAO guidelines.

For power back up 4 DG sets of 750 KVA capacities each and 2 DG sets of 320 kVA capacity each are available at the Raipur Airport, which will be sufficient after extension of runway. Exhaust emissions comprising NO₂ and SO₂ are generated from the operation of DG sets, which are operated only to meet the power requirement during grid power failure.

Vehicular emissions are also generated at the Raipur airport from the operation of vehicular traffic at the airport as ground support vehicles, passengers' pickup and dropping vehicles. These vehicles are mainly diesel and petrol driven and are source of mainly CO, HC and NO_x emissions.

For prediction of anticipated impact of emissions from the existing airport, estimation of emissions load from Aircraft LTO, DG sets and vehicles is essential. The emissions load estimation from various emission sources has been carried out in following subsection:

Sources	Emission Rate of Pollutants (g/s)			
	SO ₂	NO _x	CO	HC
Aircraft	1.86	29.40	14.81	2.17
DG set	0.248	0.278	--	--
Vehicular	--	4.17	1.75	1.33
Total	2.108	33.848	16.56	3.5

There is no continuous emissions source at the Raipur Airport. Air flights and vehicular movement remain intermittent at the airport. DG sets are also operated intermittently in the event of grid power failure.

The maximum incremental short term 24 hourly ground level concentrations of SO₂ and NO_x likely to be encountered are 6.52 and 7.43 µg/m³, respectively in post monsoon season. The ground level concentrations are occurring at a distance of 0.7 km in SW direction from the Raipur airport site.

The maximum incremental GLCs due to the Raipur airport for SO₂ and NO_x are already included in baseline air quality monitoring carried during study period as Raipur Airport is already in operation. Ambient air quality at around airport is within the prescribed National Ambient Air Quality standards.

Mitigation Measures

- Compliance of all standards prescribed by the ICAO during operation of aircrafts by preventive maintenance and monitoring;
- Stack heights of DG sets are as per the CPCB guidelines;
- Proper traffic management plan are prepared to ensue that there is no traffic congestion at airport. It will help in reduction of vehicular emissions from the airport.
- Ground vehicles at the airport are maintained and have a “Pollution Under Control” certificate;
- Development of greenery and landscaping at the airport for improving ambient air quality.
- Monitoring of ambient air quality/ source emissions will be carried out as per monitoring plan.

Noise Levels: During operation phase of the Raipur airport, landing, take-off and taxing of various types of aircrafts are major sources of air emissions. Aircraft noise modelling has been carried out using integrated noise model for the Raipur airport.

The noise levels from 65 to 85 dB(A) remain confined within the existing Raipur airport boundary. The noise levels of 55 dB(A) cross the boundary of the airport and affect 2.3 km² of area out side the airport. However, no settlement is located in close vicinity of the Raipur airport. The background noise levels range from 49.5-53.7 dB(A) at nearby villages which are located 1.9 km to 5.17 km from Raipur airport. As Raipur airport is already in operation, therefore, impact of noise levels due to the operation of existing Raipur airport is included in monitored background noise levels. However, noise mitigation measures to be implemented at and around the existing Raipur airport will further reduce the noise levels in nearby settlements.

Mitigation Measures

- It is ensured the compliance of all standards prescribed by the ICAO during operation of aircrafts by preventive maintenance and monitoring,
- Proper traffic management has been prepared to ensue that there is no traffic congestion at the airport. It helps in reduction of vehicular noise emissions from the airport,
- DG sets have been provided with acoustic enclosure as per CPCB guidelines,
- Terminal building is sound proof,
- Ground staff wears earplug while attending the aircraft,
- Landscaping and boundary at the airport act as barrier for noise;
- Green belt/plantation in the nearby settlements
- Monitoring of ambient air noise will be carried out as per monitoring plan.

Traffic Management: The Raipur Airport is located about 10 km away from Raipur City and near to Naya Raipur. At Raipur Airport traffic management has been provided in such a way no traffic jam during passenger drop and pick up. At the arrival and departure, there is proper traffic management. Therefore, there is no possibility of traffic congestion on the Raipur airport due to extension of Runway.

Mitigation Measures

- All vehicles are parked in designated parking area only;
- Road crossings are well marked and signalled.
- Informatory and warning signages are retro reflective type provided, clearly visible in the night.
- Marshals have been deployed to guide the vehicles and stop vehicles to avoid traffic jam at arrival and departure of Raipur Airport.

Terrestrial Ecology: Greenery and landscaping have been developed at the Raipur Airport. For irrigation of green belt, treated waste water from STP and accumulated rainwater are available and used. This has positive and long term beneficial impact on terrestrial ecology of the area. After extension of Runway area under Greenery and landscaping will be increased.

Mitigation Measures

- Landscaping/ plantation/ greenery will be increased after extension of runway.
- Indigenous species of trees will be planted after extension of runway at the airport.

Heritage Structures: There is no heritage, historical or archaeological structure in the area around the airport. Therefore, no impact is anticipated due to extension of runway at existing Raipur Airport. Hence, no mitigation measure is required.

Socio-Economic Environment: During operation phase after extension of runway and associated facilities, Raipur Airport will open additional direct and indirect job opportunities in the area and region. Further, it will attract more and more tourist, commercial and developmental activities in the area as international flights will land at Raipur Airport after extension of Runway. Therefore, positive impacts are anticipated on socio-economic environment during operation phase after extension.

Employment and Economic Growth - The extension of runway and associated facilities at Raipur airport will result in a boost in tourism, commercial activities in the region as international flight will be operated. This will improve direct and indirect employment opportunities, revenue generation, commercial and industrial activities; therefore, resulting in positive impact on the employment and economic growth of the region.

0.5 Analysis of Alternatives

The Raipur Airport is existing operational airport, therefore, land is required close to airport for extension of runway. The additional land required for extension of runway is 128.662 ha which has been acquired by Naya Raipur Development Authority (NRDA) and handed over to Airports Authority of India (AAI) for proposed extension of runway.

0.6 Environmental Monitoring Plan

To ensure the effective implementation of the mitigation measures and environmental management plan during proposed extension of runway, proposed apron expansion & associated works and operation phases of the Raipur Airport, environmental monitoring plan have been prepared for ambient air quality, water quality, soil characteristics and noise monitoring.

Suitable mitigation measures will be taken in case of monitored parameters are exceeding the stipulated limits. The estimated budget of Rs 0.16 Crores has been kept for environmental monitoring during construction and operation phases of the proposed works at the Raipur Airport.

0.7 Risk Assessment & Disaster Management Plan

Hazard occurrence at the Raipur airport may result in on-site implications, like, fire at the storage of ATF and filling of ATF in aircraft, leakage of ATF and leaking of HSD from day tank of DG sets followed by fire, bomb threat at terminal building, cargo terminal & aircraft and natural calamities like, earthquake, flood, etc. Other incidents, which can also result in a disaster at the Raipur airport are agitation/forced entry by external group of people, sabotage, air raids; and aircraft crash while landing or take-off.

Disaster management plan has been prepared comprising key functions of Airport operator, other supporting organizations/agencies/services for response during emergency at the existing Raipur Airport.

0.8 Project Benefits

The direct and indirect benefits of the extension of runway, apron and associated facilities at Raipur Airport are as follows:

Direct Benefits

- Operation of B-737-900/A-321-200 type (Code C) Type of Aircraft
- International flights to Raipur Airport.
- Increase in regional economy as it will boost tourism and commercial activities in the region.
- Generation of more revenue to the state, hence more development of the region.

Macro Level Benefits

- Employment opportunity to people.
- More business and industrial opportunities

0.9 Environmental Management Plan

The Airports Authority of India will be responsible for the implementation of mitigation measures identified in Environmental Management Plan (EMP) for construction and operation phases of the Raipur airport. There will be Environmental Management Cell (EMC) at the Raipur Airport to look after day to day basis implementation of mitigation measures for construction and operation phases.

An Environmental Management Cell (EMC) will be headed by Assistant General Manager supported by adequate number of personnel having sufficient educational and professional qualification and experience to discharge responsibilities related to environmental management including statutory compliance, pollution prevention, environmental monitoring, preventive maintenance of pollution control equipment and green belt development & maintenance.

Environmental Management cell will implement and review the compliance of the stipulated conditions specified in Environmental Clearance and Consent for Establishment. The cell will be responsible to obtain Consent for Operate under Water Act and Air Act from CECB.

In order to ensure that grievances and complaints by local people on any aspect of the environmental and social impacts during construction and operation phases of the Raipur airport will be addressed in a timely and satisfactory manner and that all possible avenues will be available to resolve their grievances (if any), mechanisms for Grievances Redressal will be setup. Environmental Management Cell will also work as Grievances Redressal Cell (GRC).

Budget for Environmental Management and Monitoring Plan

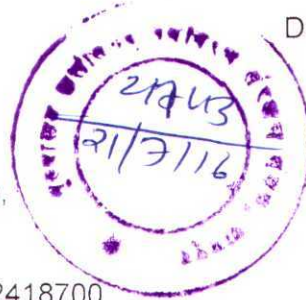
At Raipur Airport, budget for implementation of mitigation measures and environmental management plan during the construction and post construction phase of proposed works at existing Raipur airport will be Rs. 1.2 Crores.

F.No.10-6/2015-IA.III
 Government of India
 Ministry of Environment, Forest & Climate Change
 (IA.III Section)

Indira ParyavaranBhawan,
 Aliganj, JorBagh Road,
 New Delhi - 3

Dated: 14th July, 2016

To
Shri N R Dhekate, AGM (Engg.-Civil)
M/s Airports Authority of India (AAI)
 Swami Vivekananda Airport Authority of India,
 Man Raipur District Raipur Chhattisgarh.



E-mail: raipurairport@gmail.com ; fax.: +0771-2418700

Sub: Extension of Runway at 24 Beginning, Expansion of Apron Suitable for D type of Aircraft and other associated works at Swami Vivekananda Airport at Raipur, Chhattisgarh by Airports Authority of India (AAI) – Amendment in ToR

Ref.: Your online proposal no. IA/CG/MIS/26951/2015 dated 25.04.2016.

Sir,

This has reference to your online proposal no. IA/CG/MIS/26951/2015 dated 25.04.2016 regarding above mentioned subject. It is noted that MoEF&CC vide letter no. 10-6/2015-IA III dated 18th June, 2015 has issued TOR for preparation of EIA report for extension of Runway at 24 Beginning, Expansion of Apron Suitable for D type of Aircraft and other associated works at Swami Vivekananda Airport at Raipur. Now, following modifications have been proposed in the scope of work:

S.N.	As submitted earlier and mentioned in ToR letter	Modified Final Scope of Work
1	Extension of Runway at 24 Beginning, Expansion of Apron Suitable for D Type of Aircraft and other associated works at Swami Vivekananda Airport at Raipur, Chhattisgarh by Airports Authority of India.	Extension of Runway at 24 Beginning, Expansion of Apron Suitable for C Type of Aircraft and other associated works at Swami Vivekananda Airport at Raipur, Chhattisgarh by Airports Authority of India.
2	Extension of Runway Suitable for A 310-200 (Code D) Type Aircraft	Extension of Runway Suitable for B-737-900/A-310-200 (Code C) Type Aircraft.
3	The extension of runway of will have the provision of construction of new isolation bay of size 91 m x 77 m suitable for A 310-200 (code D) type of aircraft including 7.5 m wide shoulders.	Isolation bay to be suitable for B-737-900/A-310-200 (Code C) of Aircraft.
4	Expansion of apron	Expansion of apron on east side by 81 m x 88.5 m to park two additional Code '4C' type of Aircraft i.e. A321-200/B737-900.

CE(VC) / ACE(R/L)
SE(B/M/S) / EE / OC
PRO / SO(A/C) / St.O / SO-VII

(Handwritten signature)

MEMBER SECRETARY

SIE RL
 04/08/16

(Handwritten notes)
 SE(M)
 21/7/16
 21/7/16


(Handwritten note)
 5/13/16

2.0 The proposal was considered by the Expert Appraisal Committee (Infra-2) in its 6th meetings held on 23rd – 24th May, 2016 and the Committee recommended the proposal for amendment in TOR.

3.0 The Ministry accepts the recommendation of the Expert Appraisal Committee (Infra-2) for amendment in the existing TOR. The existing ToR alongwith public hearing will remain same.

4.0 All the conditions will remain unchanged.

5.0 This issues with the prior approval of the Competent Authority.


(A.N. Singh)
Scientist 'D'

Copy to:

1) Additional Principal Chief Conservator of Forests (C), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.

2) The Chairman, Chhattisgarh Environment Conservation Board, Commercial Complex, Chhattisgarh Housing Board Colony, Kabir Nagar, Raipur(C.G.)

11/05/2016
11/05/2016