BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

WESTERN ZONE BENCH AT PUNE

APPLICATION NO. 24/2018

IN THE MATTER OF

MR. RAM BABAN BORKAR ....APPLICANT

VERSUS

M/S. PARANJAPE CONSTRUCTION

(PSC PACIFIC)(PARANJAPE SCHEMES CONSTRUCTION LTD) & ORS. ....RESPONDENTS

FILE-A

[VOLUME-___]

REPLY AFFIDAVIT AND COMMENTS ON BEHALF OF ORIGINAL APPLICANT TO JOINT COMMITTEE REPORT DATED 11.08.2020 ALONG WITH ANNEXURES

(FOR PAPERBOOK INDEX KINDLY SEE INSIDE)

[REPLY AFFIDAVIT- 01 To 13]

[ANNEXURE-A-01 To A-04]

[ANNEXURE PAGE No. 14 To 466]

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FILE-A

VOLUME-III

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Date: 10.10.2020

APPLICANT

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

WESTERN ZONE BENCH AT PUNE

APPLICATION NO. 24/2018

NOTARY
T. M. PATIL
PUNE
Regd. No. 15243
Exp. Dt. 31/10/2024
GOVERNMENT OF INDIA

IN THE MATTER OF:

MR. RAM BABAN BORKAR ....APPLICANT

VERSUS

M/S. PARANJAPE CONSTRUCTION

(PSC PACIFIC)& ORS. ....RESPONDENTS

10 OCT 2020

REPLY AFFIDAVIT AND COMMENTS ON BEHALF OF ORIGINAL APPLICANT TO JOINT COMMITTEE REPORT DATED 11.08.2020 FILED BY SEIAA & MPCB.

I, Ram S/o BabanBorkar Aged: Adult, Occupation: Business, R/s: 6/1, Erandavane, Swatantra Veer Savarkar Mitra Mandal,Goodwill House, Near Nisarga Hotel, Pune-411004, do hereby solemnly affirm and state on oath as follows:

1. I state that, the report filed by the joint committee on 11.08.2020 by visiting the site on 10.08.2020 is totally false, misleading, baseless and malice on part of the government authorities seating in line with the polluters at the cost of "Mother Nature" and this conduct is very unfortunate. But something is happening behind the curtains giving high confidence to these joint committee members to file such reports which is beyond the sight of this common man applicant.Therefore, these committee members needs to be saddled with iron hands.

THIS DOCUMENTS CONTAINS 1 13 ....PAGES

2. I state that, the Original Applicant filed Original Application No. 24 of 2018 on 27.02.2018 for the violation of terms and conditions of Environment Clearance dated 04.03.2008 issued under EIA Notificaiton-2006 r/w Environment (Protection) Act-1986 and further violation of terms and condition of Consents granted by MPCB under Water (Prevention & Control of Pollution) Act-1974, Air (Prevention & Control of Pollution) Act-1981, Waste handling Rules etc..

3. I state that, the Environment Clearance dated 04.03.2008 granted by the MoEF is based on the "**Total BUA**" of the project with principal condition of the said EC is as below:

> *"2. The project proponent is proposing for construction of commercial complex "Xion"- mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hingewadi, Pune, Maharashta at a cost of Rs. 75 crore. The proposed project comprises construction of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq. m. The **total built up area** as indicated is **46,040.96 sq. m.** Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu. m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste water will be disposed of in public sewer.*

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NOTARY S. M. PATIL PUNE Regd. No. 15243 Exp. Dt. 3/10/2024 GOVERNMENT OF INDIA

The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504."

4. Further I state that, the EC dated 04.03.2008 also mandates to comply with the following terms and conditions by PP:

"Construction Phase:

ii. *All the top soil excavated during construction activities should be stored for use in horticulture/landscape developments within the project site.*

v. *Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction/operation of the project.*

vii. *Use of glass may be reduced upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.*

x. *Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.*

xii. *Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.*

Operation Phase:

iv. *The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-*

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cycled to the maximum extent possible. In case treated effluent is to be discharged separately during monsoon period consent of State Pollution Control Board shall be taken.

v. *Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.*

vii. *Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.*

viii. *The solid waste generated should be properly collected & segregated. Wet garbage (biodegradable) should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.*

ix. *The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with localspecies to reduce noise and dust level.*

x. *The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.*

xi. *A Report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the Ministry in three months time.*

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NOTARY T. M. PATIL PUNE Regd. No. 15243 EXP. DT. 31/10/2024 GOVERNMENT OF INDIA

xiv. *The buildings should have adequate distance between them to allow movement of fresh air and/o passage of light to the premises.*

PART – B. GENERAL CONDITIONS

i. *The environmental safeguards contained in the documents should be implemented in letter and spirit.*

5. *In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.*

8. *These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.*

9. *The project proponent shall enter in to MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex."*

5. Further I state that, the Consent to Establish (C to E) dated 01.08.2008granted by the MPCB is based on the **total BUA** of the project with principal condition of the said EC is as below:

*"For the development of land / plot as new construction activities involves development of commercial complex comprising of Mall & Multiplex, Hotel &Ancor shop names as M/s. Xion, CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune-411057., on total plot area of 31,451 Sq. Mtrs. &**total built up area** of **46,040.96 Sq. Mtrs.**, including utilities and services such as per*

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construction commencement certificate issued by the local body."

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6. I state that, apart from this, C to E was limiting the Sewage effluent to the 251.0 M^3/day with 100% treatment, Solid Waste Quantity 670 Kg/day, daily water domestic consumption should not exceed 381 CMD, total DG Sets to be 05 numbers with (04 X 750 KVA & 01 X 385 KVA), green belt of 33% to be developed etc.

7. **REPLY CUM COMMENTS TO THE JOINT COMMITTEE REPORT DATED 11.08.2020 AND GROUNDS FOR REJECTION OF THE JOINT COMMITTEE REPORTS:**

I state that, the Joint committee has filed this Report on behest of the Project Proponent and same is evident from the following aspects.

A. Because the committee is misleading by relying on the architect certificate of PP in point No. 1.4 of report stating that, the area 46040.96 Sqm mentioned in EC is the FSI area. In fact, PP himself has admitted in his application filed before MoEF for obtaining this EC and nowhere FSI is mentioned. **{Ref. ANNEXURE-A-1}**

B. Because the committee is misleading by relying on the architect certificate of PP in point No. 1.4 of report stating that, the area 46040.96 Sqm mentioned in EC

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is the FSI area. In fact, EC is nowhere mentions BUA as FSI.**{Ref. ANNEXURE-A-2}**

C. Because the committee is misleading by relying on the architect certificate of PP in point No. 1.4 of report stating that, the area 46040.96 Sqm mentioned in EC is the FSI area. In fact, PP himself has admitted in his consents obtained for project are disclosing same area as BUA. And Joint Committee themselves has admitted that the area of 46040.96 Sqm mentioned in Consent is BUA and not FSI in point No. 2.1.

D. Because the committee is misleading by relying on the architect certificate of PP in point No. 1.4 of report stating that, the area 46040.96 Sqm mentioned in EC is the FSI area. In fact, PP himself has admitted in his half-yearly reports dated 19.11.2017 & 17.01.2019 that the area of is the Built-up area.**{Ref. ANNEXURE-A-3 & A-4}**

E. Because the committee is misleading by relying on the architect certificate of PP in point No. 1.4 of report stating that, the area 46040.96 Sqm mentioned in EC is the FSI area. As there is no application is filed by PP for correction of BUA as FSI before MoEF till date.

F. Because the issue of definitions of FSI, Non-FSI, BUA and total construction area mentioned in EIA Notification-2006 dated 14.09.2006 and its clarification Notification dated 04.04.2011 is decided by the Hon'ble

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NGT in its Final order and Judgment dated 27.09.2016 passed in OA No. 184/2015.

G. Because the issue of definitions of FSI, Non-FSI, BUA and total construction area mentioned in EIA Notification-2006 dated 14.09.2006 and its clarification Notification dated 04.04.2011 has attended the finality as per the decision of the Hon'ble Supreme Court of Indiapassed in Civil Appeal No. 10854/2016, 10901/2016 & 5157-58/2018 passed on 10.08.2018.

H. Because the Hon'ble Supreme Court of India has already quashed the Office Memorandum dated 07.07.2017 issued by MoEF.

I. Because the Joint Committee has admitted in item-3.5 of Area Statement that, the total BUA of 50831.22 Sqm. as per the Collector sanction dated 06.01.2015 and completed BUA as per Occupancy Certificate dated 18.09.2015 is 47903.97 Sqm. Which is much excess than BUA of 46040.46 Sqm. mentioned in EC. but actual fact is that, the EC dated 04.03.2008 is granted on 46040.96 Sq. Mtrs. and PP has carried out the construction of 56469.14 Sq. Mtrs. against the full potential of 71181.00 Sq. Mtrs. as stated in condition no. 7 of the completion certificate dated 18.09.2015 issued by PMRDA.

J. Because PP himself admitted before committee that he has paid an amount of Rs. 3941060/- on 30.10.2012 and Rs. 11790990/- as penalty for carrying out illegal

THIS DOCUMENTS CONTAINS 8/12 PAGES

construction prior to sanction. Therefore, PP has carried out the illegal additional construction in contravention of EC as well as Consents and PP is liable for damage to environment and it is necessary to impose the heavy compensation on PP for restitution and restoration.

K. Because PP has carried out the illegal additional construction after expiry of validity of EC and consents.

L. Because the Joint Committee is misleading this Hon'ble NGT by jugglery of words between FSI & BUA.As there is no value for the jugglery of grant of EC on BUA and this BUA is as FSI. This is totally imaginary and worthless contention of Joint Committee. In fact EC dated 04.03.2008 have been granted on account of **Total BUA** of 46040.96 Sq. Mtrs.

M. Because, the EC has been granted on total built-up area of 46040.96 Sq. Mtrs. and joint committee in its chronology of Report dated 10.10.2019, at last column admitted that the PP has obtained the Competition certificates on 26.06.2015, 16.09.2015 and 28.09.2015 for total BUA:50831.22 Sq. Mtrs. (FSI:28510.92 Sq. Mtrs. + Non-FSI: 22320.30 Sq. Mtrs).

Sr.	Parameter	EC BUA		Sanction Plan BUA	Total BUA
1.	Total BUA	46040.96	**56469.14**	71181	25140.04

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NOTARY
T. M. PATIL
PUNE
No. 15243
Exp. Dt.
31/10/2024
GOVERNMENT OF INDIA

Because, theJoint Committee has itself admitted that there are Building sanction on 14.05.2008, first revision on 13.12.2012 and second revised on 06.01.2015, therefore construction was going on even after the expiry of validity by 03.03.2013 of the EC dated 04.03.2008.

O. Because, theJoint committee report is misleading on account of permissible area in EC dated 04.03.2008 is FSI, inspite clear cut mentioning of total Built up Area in EC.

P. Because, theJoint Committee report is misleading on account of permissible area in C to E dated 04.08.2008 is FSI, inspite clear cut mentioning of total Built up Area in C to E.

Q. Because, theJoint Committee report is misleading on account of total built up area completed at site.

R. Because, theJoint Committee report is misleading on account of construction carried out after validity of EC and no amendment is obtained for excess construction.

S. Because, theJoint Committee report is misleading on account of construction carried out after validity of Consent to establish and revised C to E is not obtained.

T. Because, theJoint Committee report is misleading on account of ground water extraction and there is no ground water test reports for top soil contamination from 2008 to 2016.

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U. Because, theJoint Committee report is misleading on account of top soil preservation and there is no soil test reports for top soil contamination from 2008 to 2016.

V. Because, theJoint Committee report is misleading on account of use of glass more than 80% in the project.

W. Because, theJoint Committee reportsare misleading on account of substantial change in scope of the project.

X. Because, theJoint Committee reportsare misleading on account of commissioning and operation of project from 2015 to 2018 without prior consent to operate.

Y. Because, the Joint Committee reports are not justified and said report is nothing but cursory, casual, unscientific and against realitiesof specific allegations in Application made by Original applicant.

Z. Because, the"Summary/Conclusion" at Point No. 5 of Joint Committee reports are a compromised statement to paint a wrong picture of the project firstly to suppress illegality and secondly to create ambiguity to help the PP and overcome the illegal practises adopted by SEIAA of granting ex-post facto EC within one day without any expert appraisal and environment impact assessment.

AA. Because, the Joint Committee reports has filed this false report with mandate to protect the higher bureaucrats of SEIAA and also failed to safeguard the environment.

THIS DOCUMENTS CONTAINS 11 13 PAGES

BB. Because the Complaints/petitions filed by individuals or organisations for environmental cause should not be allowed to misuse as capital of illegal business undertaken by authorities with statutory duties. And the unfair practises of authorities should be dealt with heavy hands.

CC. Because, these reportsareprepared only for safeguarding the interest of polluter and such reports should not be stare in the eyes of law. Therefore this report is entitle for setting aside henceforth.

DD. Therefore, the act of Joint Committee have acted against the law and under the influence of the Project Proponent and have filed totally false, baseless and misleading Reports dated 10.10.2019& 11.08.2020 and authorities appointed for the protection of environment are acting bias.

EE. Because, the misconduct of officers appointed for protection of environment is not tolerable and therefore joint committee members are liable for actions for their connivance.

8. THEREFORE, In the present facts and circumstances it is most respectfully prayed that this Hon'ble Tribunal may be pleased to pass following orders:

A. Hon'ble NGT may kindly ignore or set aside the reports dated 10.10.2019& 11.08.2020 submitted by joint committee and appropriate action may kindly be

THIS DOCUMENTS CONTAINS 12/13 PAGES

initiated against the joint committee members for unfair state of affairs.

Place: Pune
Date: 10.10.2020

DEPONENT
(RAM BABAN BORKAR)

VERIFICATION:

Verified at Pune on this 10th day of October, 2020 that the contents of the aforesaid reply affidavit are true and correct to the best of my knowledge and belief. No part of it is false and nothing material has been concealed therefrom.

DEPONENT
(RAM BABAN BORKAR)

BEFORE ME
T. M. PATIL
ADVOCATE & NOTARY
NOTARY GOVT. OF INDIA
Regd. No. 15243
Exp. Dt. 31/10/2024

Noted and Registered at Sr.No. E 259/2020
Date: 10 OCT 2020
Exp. Dt. 31/10/2024

THIS DOCUMENTS CONTAINS 13/13 PAGES

(19)

File No: 20-1/2020-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
Indira Parayavaran Bhawan
Jor Bagh, New Delhi

Date: 09/03/2020

To,

Shri Ram Baban Borkar
MNS office, Goodwill house, Near Nisarg hotel,
Karve Road, Pune – 411004, Maharashtra

Registration Number: MOENF/R/E/20/00111 & 00113

This is with reference to your online RTI applications No. MOENF/R/E/20/00111 and MOENF/R/E/20/00113 dated 04.02.2020, seeking information under the RTI Act, 2005.

2. In reply to your query, you were requested vide letter of even no. dated 18.02.2020 to submit the required fee of Rs. 484/- (434@ Rs. 2/- page + Rs. 50 for postal charges) through Demand Draft/IPO in favour of Pay & Account Officer, Ministry of Environment, Forest and Climate Change for providing the information as sought by you.

3. In response to Ministry's letter dated 18.02.2020, requisite fee of Rs. 484/- (434@ Rs. 2/- page + Rs. 50 for postal charges) has been received in the Ministry through Demand Draft No. 871182 dated 25.02.2020. Accordingly, copy of the entire file along with note sheets as requested are enclosed.

The application stands disposed.

Encl: As above (Total 217 No. of pages)

(Vinod Kumar Singh (IA-III))
CPIO & Scientist 'E'
Phone No.: 011-24695398
Email: vinodsingh.77@gov.in

15

BOOKMARKS

Category: Construction

File No.: 21-777/2007 IA III

Subject EC for Mixed Use Development Project "Xion" at Hinjewadi, Pune by M/s PSC Pacific.

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F.No. 21- 772007-IA.III
Government of India
Ministry of Environment & Forests
(IA.III Section)

Project Title:
EC for Mixed Use Development Project "Xion" at Hinjewadi, Pune.

Name and address of the Proponent:
M/s. PSC Pacific.

Sl.No.1® pp.1- /C

Under EIA Notification; 2006

Sl. No.	Information/document required	Page No.
1. ✓	Form-1	F/A
2. ✓	Form-1A	F/B
3. ✗	Conceptual plan	F/C

File submitted for consideration please.

31/8/07

AD Checked

No. 21-777/2007-IA.III

Subject: Environmental Clearance for proposed construction of commercial complex "Xion"- mixed use development at Hingewadi, Pune, Maharashta by M/s PSC Pacific,

M/s PSC Pacific, submitted a project proposal together with supporting mandatory documents for construction of commercial complex "Xion"- mixed use development at Hingewadi, Pune in July, 2007.

The proposed project comprises construction of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq. m. The total built up area as indicated is 46,040.96 sq. m

The project proposal was submitted to the Additional Expert Committee constituted for considering environmental clearance for new construction projects. The Committee discussed the proposal in its 24th meeting held on November 22-24, 2007 and awarded 'Gold' grading and recommended that environment clearance may be accorded to the project proposal for construction of proposed commercial complex under category 8(a) of EIA Notification 2006. A copy of the minutes of the meeting is placed at (F/A) (Sr. No.13).

The proposal was received after EIA Notification of 14th September 2006 and was processed for consideration for grant of environmental clearance as per procedure in EIA notification 1994 in terms of provisions of para 12 of EIA Notification, 2006 dated 14.9.2006 read with para 2.2.2. of the circular dated 13.10.2006. The proposal is of (B2) category and has been considered by the Expert Appraisal Committee at central level, as the SEAC has not been constituted for the State of Maharashtra.

A draft environmental clearance letter (F/B) is placed below for consideration and approval please.

(K. C. Rathore)
Additional Director (IA)
20.02.2008

— 4 —

R. despatch Σ c lbs.

SO(1/n.m)

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Letts 1930
5/3/08

19

PSC PACIFIC

PSC House, CTS. No.111+111/2 Anand Colony, Dr. Ketkar Road,
Pune 411 004. Tel.91-20-30223344/25440986

To,

Director (IA)
Ministry of Environment and Forests,
Paryavaran Bhawan,
CGO Complex, Lodi Road,
New Delhi – 110003.

Subject: Submission of Form 1 & Form, 1A for the proposed Mixed Use Development Project "Xion" at Hinjewadi, Pune for obtaining Environmental Clearance from Ministry of Environment and Forests.

Dear Sir,

IA-III
B 201 [illegible]
26/7/07

Please find enclosed Form 1 & Form 1A for the proposed Mixed Use Development Project "Xion" at Hinjewadi, Pune for obtaining Environmental Clearance of the said project. We request you to provide us an early date for the presentation before the appraisal committee.

Thanking you,

Yours faithfully,
For PSC Pacific

Col. Vinay Verma
Authorized Signatory

Enclosures:
Form 1 & Form1A for proposed Mixed Use Development Project "Xion" at Hinjewadi, Pune.

Minutes of 24th meeting of Expert Appraisal Committee (EAC-2) constituted for considering Environmental Clearance to new construction projects and industrial estates, held on November 22-24, at City. Club, Gurgaon.

The meeting was chaired by Shri. Brij Kishore I.A.S. (Retd.), Professor, School of Planning and Architecture. A list of those who participated in the meeting is placed at annexure.

I. Consideration of New Proposals:

The Chairman took up the Agenda and invited the project proponents to give presentation on their project proposals. The project proposals were discussed with the project proponents. After detailed discussion the Committee made final recommendations on Environmental Clearance of the individual projects as follows:

1. EC for Hotel and commercial complex sy no. 48/36, 49/b, 50/2 of village chitalsar, manpada, Ghodbunder Road, Thane by M/s. Rajesh Estates and Nirman Ltd.

The representative of project proponent made presentation on their project proposal for the construction of commercial complex at village Chitalsar, Thane. The project proponent informed that construction of commercial building will include 100 rooms Hotel and Mall. The committee was informed that CRZ clearance is not required for the project. The rainwater harvesting will be carried out and water will be stored in a tank for use in flushing the toilets. The Committee suggested that maintenance schedule should be prepared for all the equipments for regular O&M. The Committee discussed the layout plan, site plan and suggested that the internal road width should be kept minimum 9 mt. It was informed that parking space for parking of 200 cars for visitors coming to visit Mall has been provided. The Committee observed that parking space proposed for Hotel should be increased. As the project proponent provided adequate and satisfactory clarification to and assurances on the issues raised, the Committee awarded Gold Grading and recommended environment clearance to the project proposals for the construction of commercial complex.

2. **EC for Singhad Road Project at S. No. 35 to 40, village Vadgaon Budruk, Singhgad Road, Pune by M/s. Goel Ganga Developers, Pune.**

The representative of project proponent made presentation on their project proposal for the construction of group housing project. The Committee requested the project proponent to provide environment policy of the company and audit report as the company is ISO14000 accredited. The Committee enquired about the site plan, layout plan, and number of flats, contour plan, flood protection measures and environment facilities. The Committee observed that low lying area is prone to flooding and requested that flood protection plan should

be prepared. The environment facilities like STP, RWH etc. should be shown on layout plan. The Committee also suggested that proper layout plan for residential and commercial building should be prepared. As the project proponent could not provide adequate and satisfactory clarification, the Committee deferred the decision.

3. EC for proposed residential and commercial project at Kondhwa Khurd, district, Pune by M/s. Bramha Builders MH Road, Pune

The representative of project proponent made presentation on their project proposal for the construction of residential complex. The Committee enquired about layout plan/ site plan, flat configuration, open/common areas, road width, parking, water mass balance and treated effluent characteristics. The Committee observed that layout plan was not clear and need to be prepared again. The internal road width should be kept minimum 12 mts. for the project. It was suggested that separate road should be laid from parking area and that adequate parking should be provided by increasing the proposed parking area. The Committee also requested the project proponent to give various design norms used and provide water mass balance together with treated waste water characteristics. As the project proponent could not provide adequate and satisfactory clarification, the Committee deferred the decision.

4. EC for proposed redevelopment of Maitri Park at CTSN -1790 to 1811, 1813 and 1815 of village Chembur and CTS Nos 131, 133 to 140 of village Wadwali , Mumbai by M/s. Hiranandani Construction Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the redevelopment and construction of residential buildings. The Committee enquired about road configuration, size of flats, number of tenements, entry/exit point, energy conservation, rainwater harvesting, sewage treatment plant and solid waste management. The Committee requested the project proponent to provide the energy saving data for residential building. The Committee suggested that rainwater harvesting should be done with respect to depth of acquifer for recharging of ground water. The Committee also enquired about percentage of rainwater proposed to be used for recharging the ground water. The Committee requested the project proponent to provide complete cross section showing geological formation with respect to acquifer depth. The Committee also suggested that after tertiary treatment waste water should be reused as much as possible and suggested not to discharge in public sewer. The Committee requested that performance data of existing STP should be made available to the Committee. The project proponent informed that the company has applied for ISO 1400. As the project proponent could not provide adequate and satisfactory clarification, the Committee deferred the decision.

5. EC for Hotel and IT Park on plot bearing sy no. 191/A (Part) at village Yerwada, Taluka Haveli , distt, Pune by M/s. D.B. Reality Ltd.

The representative of project proponent made presentation on their project proposal for the construction of Hotel and IT Park. It was informed that 325-rooms hotel will be constructed. The Committee enquired about STP, utilization of treated sewage and suggested that treated waste water should be reused and not discharged from the premises. The Committee suggested that rainwater should be harvested and used for recharging the ground water after proper treatment. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

6. EC for proposed redevelopment project and construction of High Rise Building `Shreepati Castle` at Khetwadi, Mumbai by M/s. Shreepati Castle, Mumbai

The representative of project proponent made presentation on their project proposal for the redevelopment and construction of high rise building. The project proponent informed that redevelopment project is only for residential purpose and not for commercial use. The Committee enquired about the quality of treated sewage and suggested to recheck the MPN values. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

7. EC for Residential complex CTS No.1(pt) village Goregaon at Goregaon(W) Mumbai by M/s. Vijay Associates (Wadhwa) Construction Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential complex. The Committee enquired about site plan, location plan, permissible built up area, no. of flats proposed and their area, treated waste water quality and energy conservation measures. The Committee suggested that for recycling treated sewage, quality standard should be specified. It was informed that use of solar energy for lighting will conserve 20 to 30 percentage energy in the common area. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

8. EC for proposed shopping Mall and Office building at Vashi Navi Mumbai plot no. 19 and 20, sector-19D, Vashi Navi Mumbai by M/s. Om Housing Company Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of shopping Mall and Office building. It was informed that the project does not attract the provisions of CRZ Rules. The Committee enquired about air-conditioning of commercial building, energy conservation and utilization of treated sewage. The Committee suggested that

treated waste water should not be used for floor washing. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

9. EC for residential project plot no. 269, sector-10, at Kopra Kharghar, Mumbai by M/s. Devisha Infrastructure Pvt. Ltd.

The representative of project proponent informed that the built up area of the project is less than 20,000 sq.m and as such do not require environment clearance under EIA 2006 which was noted by the Committee.

10. Environmental clearance for proposed special Economic Zone (SEZ) IT Park at Bulibori industrial area, Nagpur district by M/s. Suyog Realtors Pvt. Ltd.

As the project proponent did not attend the meeting the Committee decided to defer decision

11. EC for proposed Group housing scheme and shops `Nirmal Nagri` Nagpur, sy no. 20, 18, Mouza-Hapur, distt- Nagpur, Maharashtra by M/s. Nirmal Ujjwal Sahakari Pvt. Sanstha Maryadit

As the project proponent did not attend the meeting the Committee decided to defer decision..

12. EC for commercial complex, CTS No. 92, 92/1 to 92/15 of village Hariyali, Vikhroli(west) L.B.S Marg, Mumbai by M/s. Rajesh Estate and Nirman Ltd.

The representative of project proponent made presentation on their project proposal for the construction of commercial complex at village Hariyali, Vikhroli (West), Mumbai. It was informed that the project site was previously occupied by an industry. The Committee suggested that project proponent should submit detailed environment site assessment report. The Committee also suggested that minimum width of internal road should be kept 9 mt and the site should use a better environmental design system. The Committee decided to defer the project proposal.

13. EC for the proposed mixed use development project `Xion` at Hinjewadi, Pune by M/s. PSC Pacific, Pune.

The representative of project proponent made presentation on their project proposal for the construction of commercial complex. The Committee enquired about site plan, layout plan, parking and waste water treatment. It was informed that parking will be provided above ground. The Committee suggested that internal road width should be increased to 9 mt. The project proponent also

informed that after adequate treatment waste water will be used for recycling and recharging the ground water. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

14. EC for commercial office Building on plot no. 32 and 32 in G-Block at Bandra Kurla complex (BKC) Bandara(East) Mumbai by M/s. Shree Naman Developers Ltd.

The representative of project proponent made presentation on their project proposal for the construction of commercial office complex. The Committee enquired about site plan, layout plan and parking. The Committee suggested that internal road width should be increased to 9 mt. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

15. EC for `Tropical Lagoon` 242/1(P) , 244/6.... H.N.P at Anand Nagar, Behind sai bada Temple Ghodbunder road, Ovala, Thane (W) by M/s.Sham Real Devel. Co. Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential complex. The Committee enquired about site plan, layout plan, STP, treated water quality, rain water harvesting, ground water recharging, energy conservation and parking. It was informed that 577 flats will be constructed and that 931 parking spaces will be provided for parking of vehicles. The Committee suggested to increase the internal road width to 9 mt. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

16. EC for Roma Builders Pvt. Ltd. `Kiran Spinning Mill` Kolshet Road, Thane(W) Maharashtra by M/s. Roma Builders Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential complex. The project proponent informed that site was previously occupied by industry and as such environmental site assessment was carried out. The Committee enquired about site plan, layout plan, STP, treated water quality, rain water harvesting, ground water recharging and parking. The Committee suggested that roof water may be used for rain water harvesting/ ground water recharging and only excess water may be discharged into storm water drain and that internal road width should be increased to 9 mt. It should also provide full details of the STP. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

17. EC for teh proposed industrial project at village Pimpalas Teh-Bhivandi, district Thane by M/s. Yogi Realty Pvt. Ltd., Thane

The representative of project proponent informed the Committee that the project may be considered as cancelled which was noted by the Committee.

18. EC for 'Nandal city' Township village Nanded Teh Haveli, district Pune by M/s. Nanded city Development and Construction Co. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of township. The project proponent informed that there will be not development upto 100 mt. towards river side and that park jogging track etc. will be development. The Committee suggested that road width should be better increased to 12 mts for better traffic circulation as the project is likely to create a model for city development for others to emulate As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

19. E C for proposed Residential cum Commercial Comlex at village Bolini, Vivar (W) by M/s Viva Enterprises.

The representative of project proponent made presentation on their project proposal for the construction of commercial complex. The Committee enquired about road configuration, air-conditioning of commercial area, STP and ground water recharging. The project proponent informed that decision has not yet been taken regarding air-conditioning of the building. The Committee suggested that ground water recharging should be done. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

Day 2

20. EC for platina proposed extension of commercial/office building on existing land, bearing plot no. C-59, G-Block, Bandra-Kurla complex, Bandra(E), Mumbai by M/s. Wadhwa Associates and Realtors Pvt Ltd.

The representative of project proponent made presentation on their project proposal for the construction of commercial/office complex. The project proponent informed that environment clearance was issued to the existing building in the year 2005 and that present proposal is for increasing the built up area to 32,000 sq.m. It was also informed that in the expansion of the building project, special type of glass will be used to reduce incoming radiation so as to maintain maximum temperature to 12 degree centigrade. The Committee suggested that retrofitting of STP may be carried out to increase treatment capacity. As the project proponent provided adequate and satisfaction

clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

21. EC for new IT (commercial) project at Powai, Mumbai by M/s. Supreme Housing and Hospitality Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of IT building and residential apartments. The project proponent informed that 25 storied building will be constructed and that for 710 flats total 1510 parking spaces have bee proposed. The Committee suggested that distance between two rows of buildings should be increased from 9 mt. to provide adequate ventilation and that the layout plan may be revised accordingly. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

22. EC for housing projects Kakade city project, Pune by M/s. Kakade construction Company Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the housing project. The project proponent informed that Pune Municipal Corporation will be provide water for the project during operation phase and that commercial area will be made fully air-conditioned. The Committee suggested that road width should be kept minimum 12 mt. and that treated sewage should be recycled within the premises so as to achieve zero discharge from the premises. The Committee also enquired about energy conservation measures proposed to be adopted. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

23. EC for corporate office campus at Hadapsar in Pune, Maharashtra by M/s Suzlon Energy Ltd.

The representative of project proponent made presentation on their project proposal for the construction of Corporate Office building to accommodate more than 2750 staff of the company. The Committee enquired about parking, utilization of wind energy, internal road width, STP, recycling of treated water and energy conservation. The Committee suggested that treated waste water should be recycled in the premises to achieve zero discharge. The road width should be increased to at least 9 mt. The STP should be modified as after aeration tank no tube settlers are required. The project proponent also informed that the building under construction will achieve 40% better energy efficiency as compared to ECBC norms. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

24. EC for a hotel /apartment hotel/commercial /IT project in Wadgaon Sheri, Pune city by M/s. Sansara Hotels India (P) Ltd.

The representative of project proponent made presentation on their project proposal for the construction of 280 rooms Hotel, IT project. The Committee enquired about rainwater harvesting, utilization of treated waste water, road configuration, energy conservation and parking. The Committee suggested that treated wastes water should be used for gardening purpose in the campus instead of fresh water. The storm water should also be used for ground water recharging after treatment and only excess flow may be diverted to the drain. The Committee suggested that internal road width should be increased to 9 mt. and that energy consumption in air-conditioning of the building should be reduced. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

25. Environmental clearance for residential complex on land of MIG Co-Op Housing society (Group V) Bandra(East) , Mumbai by M/s. Kalpatru Properties Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential complex. It was informed that 293 flats will be constructed under re-development project. The Committee enquired about energy conservation, RWH, water conservation and waste water treatment technology. The project proponent informed that 40 % water conservation would be achieved by adopting water conservation measures. It was also informed that energy conservation measures like providing double glazed windows, solar films and orientation of building etc. will be taken to reduce energy conservation for air-conditioning. The Committee suggested that road width should be increased to 9 mt. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

26 EC for proposed IT project called as Raheja Solaris on plot of Bycalla division at Shivdas champsi road, Mazaon, Mumbai by M/s. K.Raheja Universal Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of IT project. The Committee enquired about site plan, layout plan, energy conservation and parking. The project proponent informed that organic waste converter will be used for processing municipal solid waste. The Committee suggested the project proponent to re-examine if the glass coverage need be provided up to the plinth level for ensuring better energy conservation. The Committee also suggested to increase width of drive way from 6 mt. to 9 mt. As the energy consumption was found very high, the Committee requested to project proponent to arrive at benchmark figure by

energy consumption in IT projects. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

27. Environmental clearance for proposed residential project of Runwal housing and township Pvt. Ltd. Pune at Hadapsar by M/s. Runwal Housing and townships Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential project. The Committee enquired about no. of flats proposed for construction, parking, rain water harvesting and ground water re-charging. It was informed that 726 parking spaces will be provided for 70 flats. The Committee suggested that storm water should be used for ground water recharging after treatment. The project proponent was requested to give details of storm water drains, ground water re-charging etc. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

28. Environmental clearance for residential cum commercial project, plot no. 15 and 117, sector-07 at Kharghar, Navi Mumbai by M/s. Trishul Enterprises Builders and Developers.

The representative of project proponent informed that construction of the project was going on and is nearing completion The Committee noted that project does not require environmental clearance.

29. Environmental clearance for the proposed redevelopment project and construction of residential project shreepati tower , Pimpalwadi, Mumbai by M/s. Shreepati Tower.

The representative of project proponent made presentation on their project proposal for the redevelopment and construction of residential project. The project proponent informed that the project is a joint venture project with MHADA. The Committee enquired about parking, ventilation and water quality. The Committee suggested that distance between two building blocks is inadequate for ventilation and may be reexamined. The project proponent informed that no court case is pending with neighbouring plot holders. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

30. Environmental clearance for residential complex CTS No. 134C, 135 and 136 of village Akruli, Kandivali (E) Mumbai by M/s. Neo-Pharma Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential complex. The project proponent

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informed that environment clearance was issued to the building currently under construction and that present proposal is for additional construction proposed. The Committee suggested that STP may be modified from batch process treatment to continuous process treatment. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

31. Environmental clearance for residential and commercial project tropical mist no. 64/1 at Chitalsar, Manipada Thane(W) by M/s. Gold Minar Developers Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential-cum-commercial project. The Committee enquired about parking, ground water, storm water management and energy conservation. It was informed that separate parking will be provided for each building. The Committee suggested that storm water should be utilized within the campus and that it should not be discharged outside the premises. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

32. Environmental clearance for proposed residential project` Vasant Avenue` at Pimple Saudagar, S.N. 172 (P) Pune by M/s. Vasant Builders , Pune.

The representative of project proponent made presentation on their project proposal for the construction of residential project. The project proponent informed that 255 flats will be constructed and that solar lighting may not be economically viable for the project. The Committee discussed the site plan, layout plan and suggested that layout plan should be modified showing internal roads with adequate width. The Committee also suggested that water balance should be corrected and prepared again. The Committee suggested that STP should be modified and input and output characteristics should also be indicated. The details of rain water harvesting system should be provided to the Committee. As the project proponent could not provide adequate clarifications the Committee deferred decision on environment clearance to the project.

33. Environmental clearance for proposed `Sanskriti residential project at Wakad S .No. 222 (P), 223 (P) , 228 (P) Wakad Tel. Mulshi, Pune by M/s. Arun Sheth and Co. Pune.

The representative of project proponent made presentation on their project proposal for the construction of residential project. The Committee enquired about parking, storm Water management, STP and entry/ exit points. The Committee suggested that Storm water should be used for ground water recharging after treatment. A pre settling tank should be provided in the STP.

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The Committee suggested that entry to the basement parking may be modified. All internal roads should have at least 9 mtr width. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

34. Environmental clearance for proposed `Satyakunj` at plot no. 49 and 57-62, sector-36, Kamothe, Tal Panvel Raigad, Maharashtra by M/s. Haware construction Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of residential project. The Committee enquired about number of flats proposed, parking, RG area, internal road width energy conservation rain water harvesting, STP and storm Water management. The Committee suggested that all internal roads should have at least 9 mtr width. The parking provision was found grossly inadequate and requested to modify it. The design of Rain Water Harvesting system should be provided together with drawings. The Committee also requested the project proponent to give details of Storm Water Management Plan. As the project proponent could not provide adequate clarification the Committee decided to defer decision on the environment clearance to the project.

35. Environmental clearance for proposed Aditya - A Garden city` residential project at Warje, Sy No. 109, 110 Pune by M/s. Aditya Construction, Pune.

The representative of project proponent made presentation on their project proposal for the construction of residential project. The Committee enquired about parking, Water Supply, Water balance, use of treated sewage, rain water harvesting, STP, internal road width, use of solar energy, green and recreational area and solid waste management. The Committee suggested that dual piping should be provided and treated sewage should be used for flushing purpose. The Committee also suggested that treated sewage should be used for ground water recharging and that STP design should be modified. The Committee also suggested to recalculated rain water run off using appropriate co-efficient and re-distribute pits. As the project proponent could not provide adequate clarifications, Committee decided to defer the decision on environmental clearance to the project.

36. Environmental clearnce for proposed `Wadhwa IT Park at vishrantwadi s.n. 44 and 45 Dhanri village, Vishrantwadi Pune by M/s. Raghulede Builders Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of IT Park. The Committee enquired about bus parking, footfalls, reuse of treated waste water, STP, energy conservation, reduction in solar radiation and energy consumption. The project proponent

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informed that close to 17000 people may work in the voice based BPO (IT Park). The Committee suggested that treated sewage should not be used for re-charging ground water due to proximity to river. The Committee also suggested that softener may not be required in STP. The project proponent informed that the energy consumption for the IT Park would be around 300 kwh /sq.m/ year. The Committee suggested that as the proposed energy consumption is very high. Efficient glazing should be used to reduce energy requirement and it is a win-win option as the expenditure could be recovered within 2-5 years. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

37. Environmental clearance for proposed`Tera space` IT project at Kharadi, sy no. 401 Pune Nagar Highway Tal-haveli, Distt Pune by M/s. I-Ven-Kolte Patel Project (Pune) Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the construction of IT project. The Committee suggested that the natural course of drain passing through the plot should not be changed by the project proponent. The Committee enquired about entry exit points, STP, treated waste water quality, storm water management and energy conservation. The Committee suggested that STP should be modified and ECBC norms should be followed. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

38. EC for IT Project S. No. 47/1B ....90/A/1, 90/B at Mouje, Dhanori, Pune Lunkad Realty Tata Blue Hills, Pune.

The representative of project proponent made presentation on their project proposal for the construction of IT project. The Committee enquired about site plan, layout plan, bus parking, road width, STP, energy conservation and air-conditioning of the building. The Committee suggested that minimum internal road width should be kept 9 mt. and the building envelope should be reduced to reduce load on air-conditioning plan. The project proponent informed that energy consumption for the project would be 4-7 W/ sq.m. As the project proponent provided adequate and satisfaction clarification the Committee awarded Gold Grading and recommended environment clearance to the project.

39. Environmental clearance for proposed `Special township project` of Lodha Dwellers Pvt. Ltd. at Asode, Tal Ambernath, district Thane Lodha Dwellers Pvt. Ltd.

The representative of project proponent made presentation on their project proposal for the development and construction of Township project. The Committee suggested that the project proponent should provide phase-wise development plan for the whole duration of the project for Mall, Hospital and

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residential area with respect to water management, waste management, energy conservation etc. The Committee decided to defer decision.

Day 3

Re-consideration of Old Proposals:- The Committee discussed the clarifications submitted by the project proponents for reconsideration of their project proposal and after detailed discussion, the Committee made final recommendations on environmental clearance of the individual projects as follows:

40. Construction of Residential township at Murthal, Sonepat, Haryana by M/s. Maksad Estate & Hardware Ltd.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 22nd EAC meeting and decision was deferred. The project proponent was requested to connect the isolated plot which is not in possession of the project proponent with 25 M wide road so as to provide direct access to the National Highway. The Committee had also requested the project proponent to provide break up of total area into green belt roads, amenities and schools etc. As the project proponent had submitted information and clarifications as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the information given by the project proponent and decided to recommend the environment clearance to the project proposal for the construction of township at Murthal, Sonepat, Haryana.

41 Construction of new project at Sector-89, Faridabad, Haryana by M/s. Piyush Buildwell India Ltd.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 22nd EAC meeting and decision was deferred. The project proponent was requested to increase road width from 6 M to 9 M, increase parking space for vehicles and compensate abstraction of ground water with recharging. The Committee had also requested the project proponent to provide water mass balance, note on utilization of solar energy and to modify the layout plan. As the project proponent had submitted data, information and drawings etc. as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the information given by the project proponent and decided to recommend the environment clearance to the project proposal for the construction of housing project at Faridabad, Haryana.

42. Construction of IT Park construction at IMT Manesar, Gurgaon Plot no. 2, Haryana by M/s. Vigneshwara Developers, Gurgaon.

As the project proponent did not attend the meeting the Committee decided to defer decision.

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43. Construction of `DLF IT Park` at Sector-15, Gurgaon Haryana by M/s. DLF Ltd.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 22nd EAC meeting and decision was deferred. The project proponent was requested to provide modified parking plan after including bus parking bays. As the project proponent had submitted modified parking plan as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the modified parking plan given by the project proponent and decided to recommend the environment clearance to the project proposal for the construction of DLF IT Park at Gurgaon, Haryana.

44. Construction of crown interiors specialty concept Mall project at Faridabad, Haryana by M/s. Crown Builtech Pvt. Ltd.

The Committee decided to further defer decision on the project proposal due to lack of information on the subject.

45. Construction of residential township project at village Kabri, Faridpur, Sector-37 and 39, Panipat, Haryana by M/s. Teneja Developers Ltd.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 22nd EAC meeting and decision was deferred. The project proponent was requested to provide modified parking plan and STP. As the project proponent had submitted modified parking plan and STP details as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the modified parking plan and revised STP design given by the project proponent and decided to recommend the environment clearance to the project proposal for the construction of residential township project at Panipat, Haryana.

46. Construction of Group Housing Project at Village Budena, Sector-86, Faridabad by M/s. Countrywide Promoters Pvt. Ltd.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 20th EAC meeting and decision was deferred. The project proponent was requested to provide copy of NOC from HSPCB and an undertaking that borewell water will not be used for construction work. As the project proponent had submitted information and documents as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the information and documents with the project proponent and decided to recommend the environment clearance to the project proposal for the construction of group housing project at Faridabad, Haryana.

47. Construction of Group Housing Project at Sector-57, Gurgaon by M/s. Country Wide Promoters Pvt. Ltd.

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The Member Secretary briefed the Committee regarding project proposal which was considered in the 20th EAC meeting and decision was deferred. The project proponent was requested to provide copy of letter issued by HUDA for supplying adequate quantity of water, an undertaking that primary, secondary and tertiary treatment will be provided for the treatment of sewage, sources of assured water supply, analyse of ground water and details of approved landfill site for the disposal of solid waste. As the project proponent had submitted information and documents as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the information and documents with the project proponent and requested to install STP, provide names of landfill site and copy of agreement, correspondence etc. with the solid waste handler (private parties) and decided to recommend the environment clearance to the project proposal for the construction of group housing project at Gurgaon, Haryana.

48. Construction of Divine Paradise Group Housing Project at Ganam, Distt. Sonipat by M/s. Rama Krishna Buildwell.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 20th EAC meeting and decision was deferred. The project proponent was requested to provide details of authorized landfill sites and design details of STP. The Committee had also requested to provide copy of NOC from HSPCB, identify water bearing zones and design rainwater harvesting system accordingly. As the project proponent had submitted information and documents as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the data and information with the project proponent and decided to recommend the environment clearance to the project proposal for the construction of group housing residential project at Sonipat, Haryana.

49. Construction of Residential Township Project at Sector 75-77 & 80-89, Faridabad, Haryana by M/s. Countrywide Promoters Pvt. Ltd.

The Member Secretary briefed the Committee regarding project proposal which was considered in the 20th EAC meeting and decision was deferred. The project proponent was requested to increase green belt by 10 %. As the project proponent had submitted information and documents as desired by EAC the proposal was resubmitted to the Committee for decision. The Committee discussed the data and information with the project proponent and decided to recommend the environment clearance to the project proposal for the construction of residential township project at Faridabad, Haryana.

Consideration of New Projects

50. EC for Mall project at 96 Km stone, village Nizampur, Teh and district Panipat, Haryana by M/s. Crown Buildtech (P) Ltd.

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The representative of project proponent made presentation on their project proposal for the construction of Mall project. The project proponent informed that construction will comprises of hotel with residential apartment and Mall. The Committee enquired about site plan, layout plan, entry/exit point, STP, parking data and siting of schools. The Committee suggested that a primary settling tank may be provided before aeration tank. The project proponent was requested to provide documents indicating that school land will be acquired for SEZ. The Committee decided to defer decision on the project proposal.

51. EC for IT Park, Project at 20/6, Delhi Mathura Road, Sec-5, Faridabad, Haryana by M/s. Crown Technobuild (P) Ltd.

The representative of project proponent made presentation on their project proposal for the construction of IT Park. The Committee enquired about water requirement for the project, ISO 1400 and number of working population in the IT project. The Committee suggested to recalculate water requirement according to the projected population of the project and also to indicate benchmark for various environmental parameter in the revised figures for the construction of IT Park. The Committee decided to defer decision on the project proposal.

52. EC for Mall at village Dholagarh sector-14, Teh Palwal, Faridabad by M/s. Crown Technobuild (P) Ltd.

The representative of project proponent made presentation on their project proposal for the construction of Mall project. The project proponent informed that construction will comprises of hotel with residential apartment and Mall. The Committee enquired about site plan, layout plan, entry/exit point, STP and parking data which the project proponent could not provide to the satisfaction of the committee. The project proponent was requested to provide primary settling tank before aeration tank and modify the STP. The Committee decided to defer decision on the project proposal.

53. EC for plotted development project at village Jarai, Teh Gharonda, district Karnal, Haryana by M/s. Crown Promoters and Developers.

The representative of project proponent informed that they are withdrawing the project and do not intend to pursue the project. The Committee noted it.

54. EC for DD city at Sector-77, Faridabad, Haryana by M/s. DD Township Ltd., D.D House, F-1/9 , Okhla Industrial Area, Phase-I, New Delhi

The project proponent made a presentation on their project proposal for the construction of township project at Faridabad. The project proponent informed that only plots will be sold. However, construction of flats may also be considered at a later stage. The Committee enquired about parking, water

requirement, road width, sewage treatment plant and common facilities proposed in the township. The project proponent should formulate the proposal on the basis of some clearly identified prevailing norms and thumb rules. The Committee requested to work out parking and water requirement on the basis of prevalent norms. It was also suggested to identify and work out parking spaces for school buses in the township. The Committee suggested that width of driveway should be atleast 9 M. Since the project proponent could not provide information as required and did not have clear idea about them, the Committee decided to **reject** the project proposal

55. EC for group housing project at sector-10, Sonipat, Haryana by M/s. Vardhman Developers and Infrastructure Pvt. Lt.d.

The project proponent made a presentation on their project proposal for the construction of group housing project at Sonepat. The project proponent informed that for 889 tenements, parking proposed is 1334 slots. The Committee, however, suggested that parking may be increased. The Committee enquired about rainwater harvesting, STP, water requirement, water mass balance, recharging ground water and energy conservation. The Committee also suggested that treated waste water should be used for recharging the ground water. As the project proponent provided adequate and satisfactory clarification, the Committee recommended the environment clearance to the project proposal for the construction of housing project.

56. EC for residential township project at village chandoli, Nizampur, sector-19 A and 40, Panipat , Haryana by M/s. Lotus Buildtech Ltd.

The project proponent informed that area of township being less than 50 hectare, it is exempted from the purview of EIA Notification 2006. The Committee noted it.

57. EC for IT Park at Rai, Sonipat Haryana by M/s. DLF Commercial developers Ltd., Sansad Marg, New Delhi .

The project proponent made presentation on their project proposal for the construction of IT Park. The Committee enquired about parking, glass area, air-conditioning of the building, energy conservation and energy consumption, water requirement, STP,landscape plan and zero discharge. The project proponent was requested to give break up of parking proposed for buses, cars etc. and redesign parking arrangement. It was also suggested to recalculate water requirement according to number of persons projected to work in three shifts. The Committee also suggested that equalization tank may be replaced with primary settling tank. The Committee also suggested to modify landscape plan taking into consideration the need for thermal efficiency due to solar radiation. In case, diesel storage is required, layout plan may have to be

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modified. However, the Committee recommended the project for environment clearance.

58. EC for group housing project at sector-5, Teh. Palwal district, Faridabad, Haryana by M/s. SRS Builders Ltd., Faridabad

The project proponent made presentation on their project proposal for the construction of group housing project. The Committee enquired about parking, water requirement, STP, waste water and characteristics. The project proponent informed that STP would be provided to treat sewage generated in the project area. The Committee awarded Gold grading and recommended the project for environment clearance.

xxx

Annexure

List of those who attended the meeting

S.No.	Name	Designation & Organisation
1.	Shri Brij Kishore	Chairman
2.	Prof. Arvindkumar	Member
3.	Dr. Vijay Kulkarni	Member
4.	Dr. K. C. Rathore	Member Secretary and Additional Director, MOEF, New Delhi

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Draft

F.No. 21-777/2007-IA.III
Government of India
Ministry of Environment and Forests
(I.A. division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110510

Dated: 20.02.2008

To,

M/s PSC Pacific,
PSC House, CTS No.111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune 411004
Maharashtra

Subject: Environmental Clearance for proposed construction of commercial complex "Xion"- mixed use development at Hingewadi, Pune, Maharashta.

Dear Sir,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. Form 1 & 1 A, and Conceptual Plan and the additional clarifications furnished in response to the observations of the Additional Expert Appraisal Committee constituted by the competent authority in its 24th meeting held on Nobermber 22-24, 2007.

2. The project proponent is proposing for construction of commercial complex "Xion"- mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hingewadi, Pune, Maharashta at a cost of Rs. 75 crore. The proposed project comprises construction of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq. m. The total built up area as indicated is 46,040.96 sq. m. Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu. m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste water will be disposed of in public sewer. The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504.

3. The EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its

observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the EMP and other stipulated conditions. Accordingly, the Ministry hereby accords necessary environmental clearance for the project under category 8 (a) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

PART A- SPECIFIC CONDITIONS

I. **Construction Phase**

i. Vehicles hired for construction activities should be operated only during non-peak hours.
ii. All the top soil excavated during construction activities should be stored for use in horticulture/landscape developments within the project site.
iii. Ready mixed concrete shall be used in building construction.
iv. Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.
v. Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction/operation of the project.
vi. Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
vii. Use of glass may be reduced upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
viii. Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.
ix. Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.
x. Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.
xi. All required sanitary and hygienic measures including portable toilets/septic tank etc. for labour should be in place before starting construction activities and to be maintained throughout the construction phase.
xii. Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.
xiii. A First Aid Room will be provided at the project site both during construction and operation of the project.
xiv. Adequate drinking water facility should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.

xv. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and be disposed off taking the necessary precautions for general safety and health aspects of people.

xvi. Diesel power generating sets used during construction phase should be of "enclosed type" to prevent noise and should conform to rules made under Environment (Protection) Act 1986, prescribed for air and noise emission standards.

xvii. Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.

xviii. The construction agencies shall use flyash based material/ products as per the provisions of fly ash notification of 14.9.1999 and as amended on 27.8.2003.

xix. Vehicles hired for bringing construction material at site should be in good condition and should have valid "pollution under check"(PUC) certificate and to conform to applicable air and noise emission standards and should be operated only during non-peaking hours.

xx. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they should not leach into the ground water.

xxi. Any hazardous waste generated during construction phase should be disposed of as per applicable Rules & norms with necessary approvals of the State Pollution Control Board.

xxii. Under the provisions of the Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it was found that construction of the project had started without obtaining environmental clearance.

xxiii. The diesel required for operating DG Set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosives shall be taken.

xxiv. The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act from the Competent Authority shall be taken.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.

II. Operation Phase

The environmental clearance recommended to the project is subject to the specific conditions as follows:

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i. Diesel power generating sets proposed as source of back up power for lifts, common area illumination and for domestic use should be of "enclosed type" and conform to rules made under The Environment (Protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.

ii. Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex.

iii. Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.

iv. ~~Three~~ STPs shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-cycled to the maximum extent possible. In case treated effluent is to be 'discharged separately during monsoon period consent of State Pollution Control Board shall be taken.

v. Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.

vi. For disinfection of waste water ultra violet radiation shall be used in place of chlorination.

vii. Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.

viii. The solid waste generated should be properly collected & segregated. Wet garbage (biodegradable) should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.

ix. The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.

x. The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.

xi. A Report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the Ministry in three months time.

xii. The values of R & U for the building envelope should meet the requirements of the hot & humid climatic location. Details of the building envelope should be worked out and furnished in three months time.

xiii. Energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoid Mercury contamination. Use of solar panels may be done to the extent possible.

xiv. The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the premises.

xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.

PART – B. GENERAL CONDITIONS

i) The environmental safeguards contained in the documents should be implemented in letter and spirit.

ii) Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.

iii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

4. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

7. Necessary permission shall be obtained from the State Fire Department for providing fire safety measures before commissioning of premises for commercial purpose. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.

8. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

9. The project proponent shall enter in to MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Secretary, Department of Environment, Government of Maharashtra, New Administrative Building, 15th Floor, Opp. Mantralaya, Mumbai.
2. The Member Secretary, Maharashtra State Pollution Control Board, Kalptaru Point, 3rd Floor, Near Sion Circle Opp. Cine Planet Cinema, Sion(E), Mumbai.
3. The CCF, Regional Office, Ministry of Envi ronment & Forests, Bhopal.
4. IA - Division, MOEF, New Delhi - 110001.
5. Guard file.

(K.C. RATHORE)
Additional Director (IA)

By Speed Post

F.No. 21-777/2007-IA.III
Government of India
Ministry of Environment and Forests
(I.A. division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110510

Dated: 04.03.2008

To,

M/s PSC Pacific,
PSC House, CTS No.111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune 411004
Maharashtra

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By Speed Post

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Paryavaran Bhawan,
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O/C letter issued 5/3/08

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xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.

PART – B. GENERAL CONDITIONS

i) The environmental safeguards contained in the documents should be implemented in letter and spirit.

ii) Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.

iii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

4. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

7. Necessary permission shall be obtained from the State Fire Department for providing fire safety measures before occupying/ handing over the premises to the owners/ allotees. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.

8. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

9. The project proponent shall enter in to MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Secretary, Department of Environment, Government of Maharashtra, New Administrative Building, 15th Floor, Opp. Mantralaya, Mumbai.
2. The Member Secretary, Maharashtra State Pollution Control Board, Kalptaru Point, 3rd Floor, Near Sion Circle Opp. Cine Planet Cinema, Sion(E), Mumbai.
3. The CCF, Regional Office, Ministry of Envi ronment & Forests, Bhopal.
4. IA - Division, MOEF, New Delhi - 110001.
5. Guard file.

(K.C. RATHORE)
Additional Director (IA)

ENVIRONMENTAL IMPACT ASSESSMENT

"XION" – Mixed Use Development

at Hinjewadi, Pune

MoEF Presentation:-: 22nd November 2007

Prepared and presented by

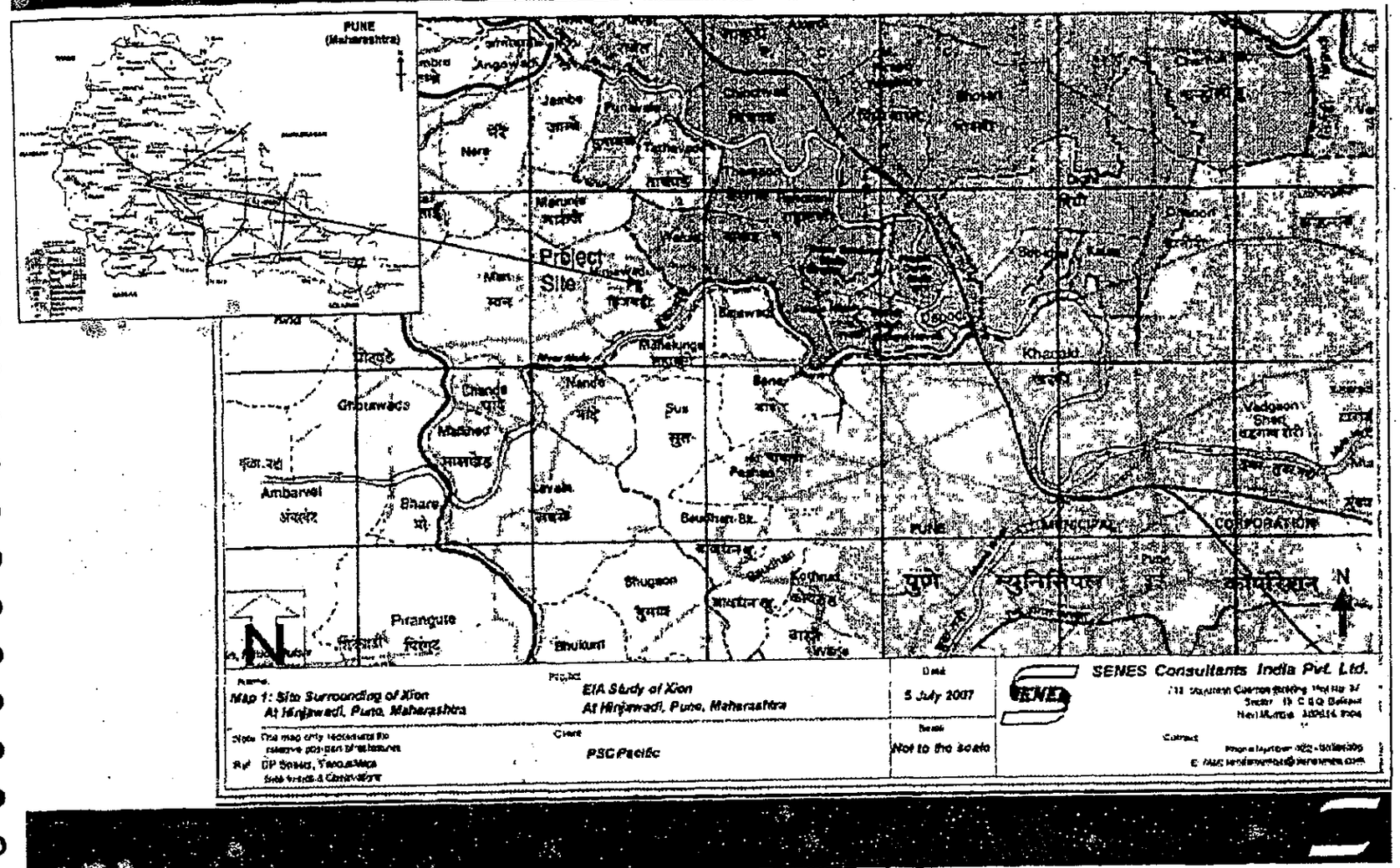
SENES Consultants India Pvt. Ltd., Mumbai.

M/s. PSC Pacific

22/11

38

380


PUNE
(Maharashtra)
Project
Site
Ambarvet
Bhare
Pirangute
Bhukum
Shigaon
Khadki
Vadgaon
Sheri
PUNE
MUNICIPAL
CORPORATION
N
Map 1: Site Surrounding of Xion
At Hinjawadi, Pune, Maharashtra
EIA Study of Xion
At Hinjawadi, Pune, Maharashtra
5 July 2007
Not to the scale
PSC Pacific
SENES Consultants India Pvt. Ltd.

PROJECT Details

- **Proposed site is located at Hinjewadi, Pune bearing CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2.**
- **Land Use – Mixed Use**
- **Cost of the project – Approx. Rs. 75 Crores**
- **Area details –**
  - Total plot area: 31,451Sq.m.
  - Total built-up area: 46,040.96Sq.m
    - Mall & Multiplex: 23,336.57Sq.m.
    - Hotel:16,222.19Sq.m.
    - Anchor Shop: 6,482.5Sq.m
    - Projected Population: 6,000 nos.

58
No
382

PROJECT Infrastructure & Services

Power Supply :

- Requirement during operation phase — 5063kVA (Maharashtra State Electricity Distribution Co. Ltd.)
- Power back up

Water Requirement :

- Total water demand — 661 m^3/day
- Treated water from STP — 136 m^3/day (Mall and Multiplex)
  198 m^3/day (Hotel)
  for gardening and for A/C makeup water requirements
- Source — MIDC*

** Maharashtra Industrial Development Corporation*

PROJECT Infrastructure & Services

Parking

	4 Wheeler	2 Wheeler
• Parking required	316	452
• Parking provided	470	452

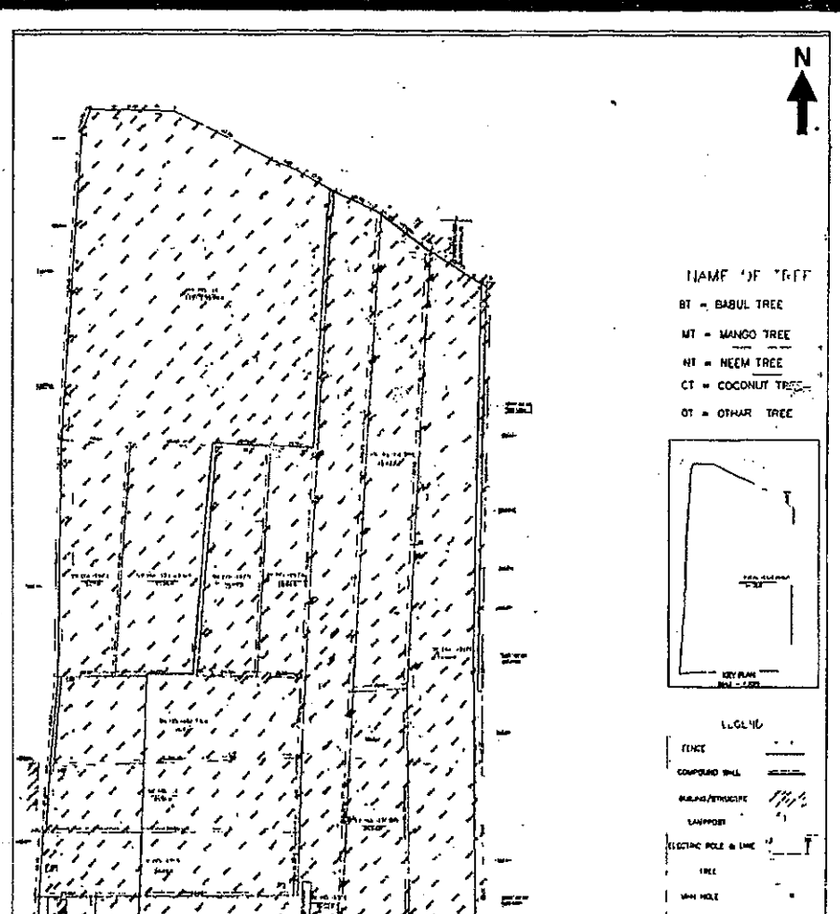
Green Areas

- Building footprints : 25% of plot area
- Remaining area : open area, dense landscape and planters area.

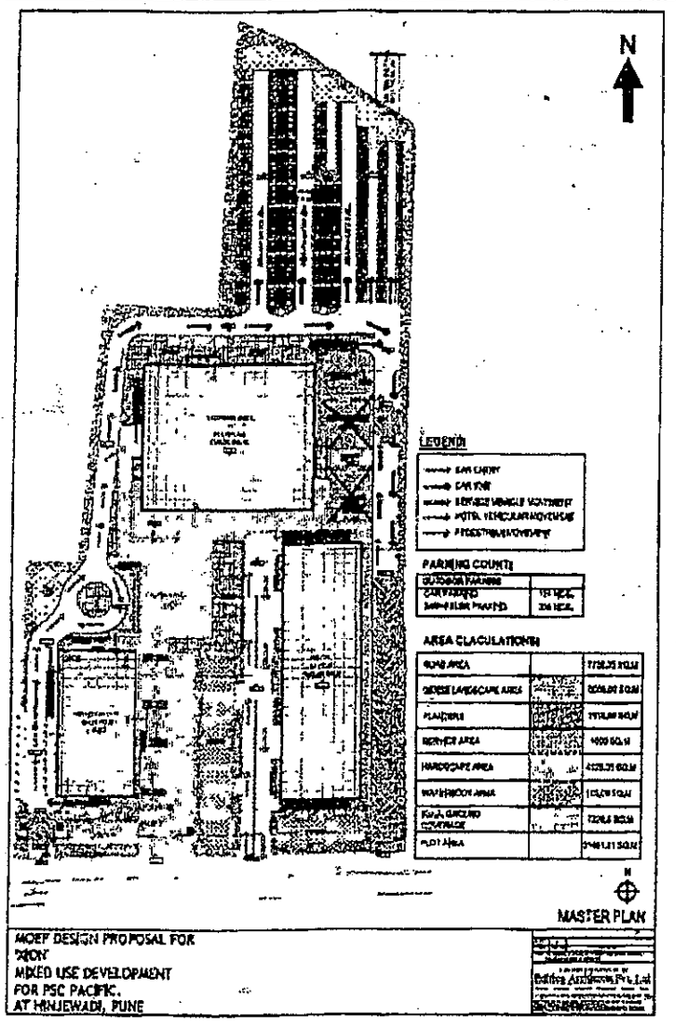
Infrastructure Facilities

- Sewage Treatment Plant, Water Treatment Plant, Sewer lines, Storm water drainage, solid waste management
- Electricity, roads, telephones, fire detection and fire fighting system

SITE FEATURES



PROJECT – Proposed Layout



QUALITY ASSURANCE

- International standards of quality, security and environment
- Structural design meets Seismic Zone-3 requirements
- Compliance to construction norms & BIS* Codes
- Building Regulation/ Guidelines would be followed

*BIS: Bureau of Indian Standards

EIA - METHODOLOGY

- As per MoEF's requirements and guidelines
- Study area :10 km radius
- Environmental attributes assessed – Air, Water, Land, Noise and Biological
- Data collected through primary monitoring and secondary sources (Government Organizations, existing technical studies)
- Impact Assessment by using predictive techniques
- Environment Management Plan

BASELINE –

- Primary monitoring of Air Quality at 5 locations
- Monitoring for SPM, RSPM, NO_x, CO, SO_2
- All parameters are within limits
- Noise monitoring at six locations

BASELINE –

- Primary monitoring of Water Quality at 4 locations
- Sample location include one surface water and three bore wells
- Heavy metals: below detectable limits
- Coliforms present in surface water

BASELINE –

- Located in Seismic Zone 3
- Soil sampling – at 3 locations
- Soil at site is sandy clay
- Slightly alkaline pH

BASELINE – BIOLOGICAL ENVIRONMENT

- Sparse vegetation on site
- Local ecosystem is characterized by common afforested tree species such as Parthernium hysterophorus Linn, Cassia uniflora Mill, Xanthium strumarium linn. etc.
- No endangered species present

EIA STUDY PROJECT IMPACTS

Environmental Component	Potential Impact	Construction Phase	Operation Phase	Remark
Air	NOx and Noise from Standby DG power supply	o	o	DG used only in case of power failure
	SPM due to construction activity	o	×	Dust control plan
	Vehicular traffic	o	o	Sufficient parking space, provision of adequate roads
Water	Pressure on Groundwater resources	×	+	No use of Ground water
	Min. discharge in Municipal Sewers	×	×	Sewage would be treated in STP at site

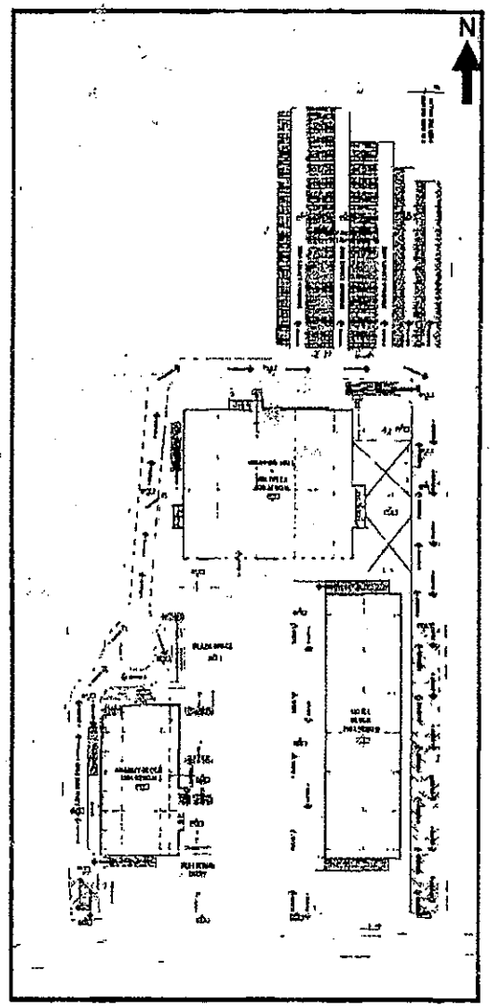
Negligible Impact	o		Positive Impact	+		Not Applicable	×

EIA STUDY PROJECT IMPACTS

Environmental Component	Potential Impact	Construction Phase	Operation Phase	Remark
Land	Solid Waste Disposal	x	+	Segregation at source
	Landscaping	x	+	
Biological	Habitat for flora and fauna	x	+	Improvement due to increase in green cover
Socio-Economic	Job Opportunities	+	+	Increased job opportunities
	Aesthetics	x	+	Improvement due to landscaping and other facilities

Negligible Impact	o		Positive Impact	+		Not Applicable	x

Internal Traffic Circulation



LEGEND:

- CAR ENTRY
- CAR EXIT
- SERVICE VEHICLE MOVEMENT
- HOTEL VEHICULAR MOVEMENT
- PEDESTRIAN MOVEMENT

Traffic Scenario

- Traffic generated due to Xion: 470 nos. of 4 wheelers & 452 nos. of 2 wheelers

Road Name	No. of Lanes	PCU Capacity	Present PCU	PCU* 2010	PCU 2010+ Project	V/C
Hinjewadi Road (4 lane divided)	4	4800	747	1073	1769	0.37

* Revised Action Plan for Control of Air Pollution in Pune – Part I, MPCB

7-2-396

ENVIRONMENT MANAGEMENT PLAN - AIR

Construction Phase

- Dust control plan
- Speedy Completion of Project by using:
  - Ready Mix Concrete
  - Off-site fabrication of structural components.
- Improved Maintenance of vehicles
- Vehicles with Euro II/ III or Bharat Stage II/ III standards will preferably be used

Operation Phase

- Provision of parking space
- Management of internal traffic with the usage of two-way drive ways.
- Provision of speed breakers, signage's for easy circulation of traffic

ENVIRONMENT MANAGEMENT PLAN - NOISE

Construction Phase

- Maintenance of Construction equipment periodically.
- Barricading of the construction area with 3m high barrier of GI Sheet
- Job Rotation and Hearing Protection

Operation Phase

- Provision of adequate parking space
- Acoustic Enclosure for D.G. Set
- Use of D. G. set for essential services as alternate power supply

ENVIRONMENT MANAGEMENT PLAN - WATER

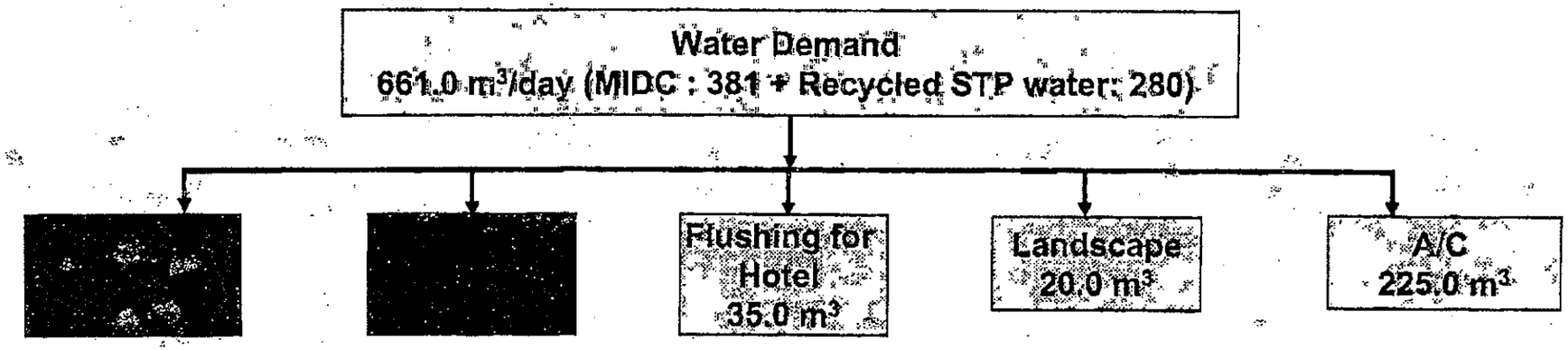
Construction Phase

- Leak proof containers for storage and transportation of oil/ grease
- Maintenance of oil/grease handling area
- Provision of temporary sanitation facilities for workers with septic tank

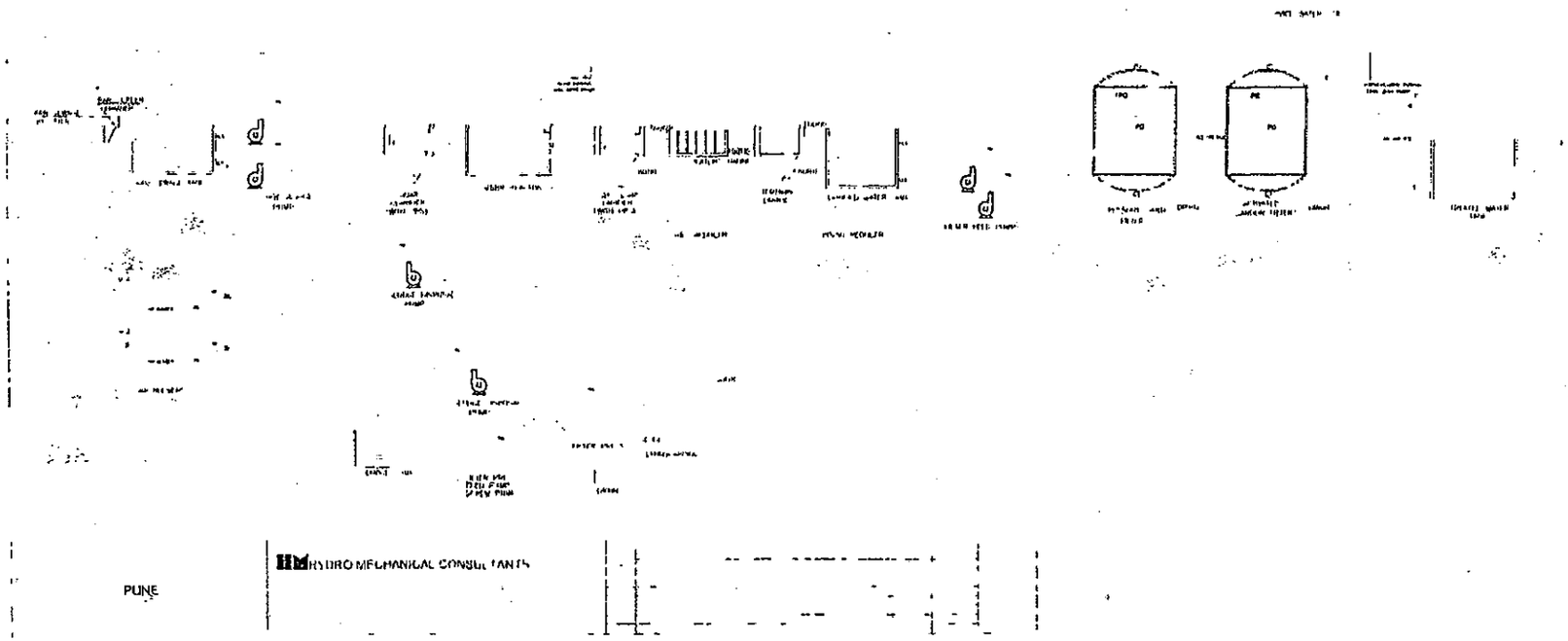
Operation Phase

- Treatment of sewage in STP
- Use of treated sewage for A/C makeup and landscaping
- RWH scheme
  - Roof top RWH and surface water harvesting
  - Recharging of groundwater
- Minimizing Water Consumption
  - Use of manually pressed button flush valve, dual flushing system
  - Water Efficient Plumbing Fixtures

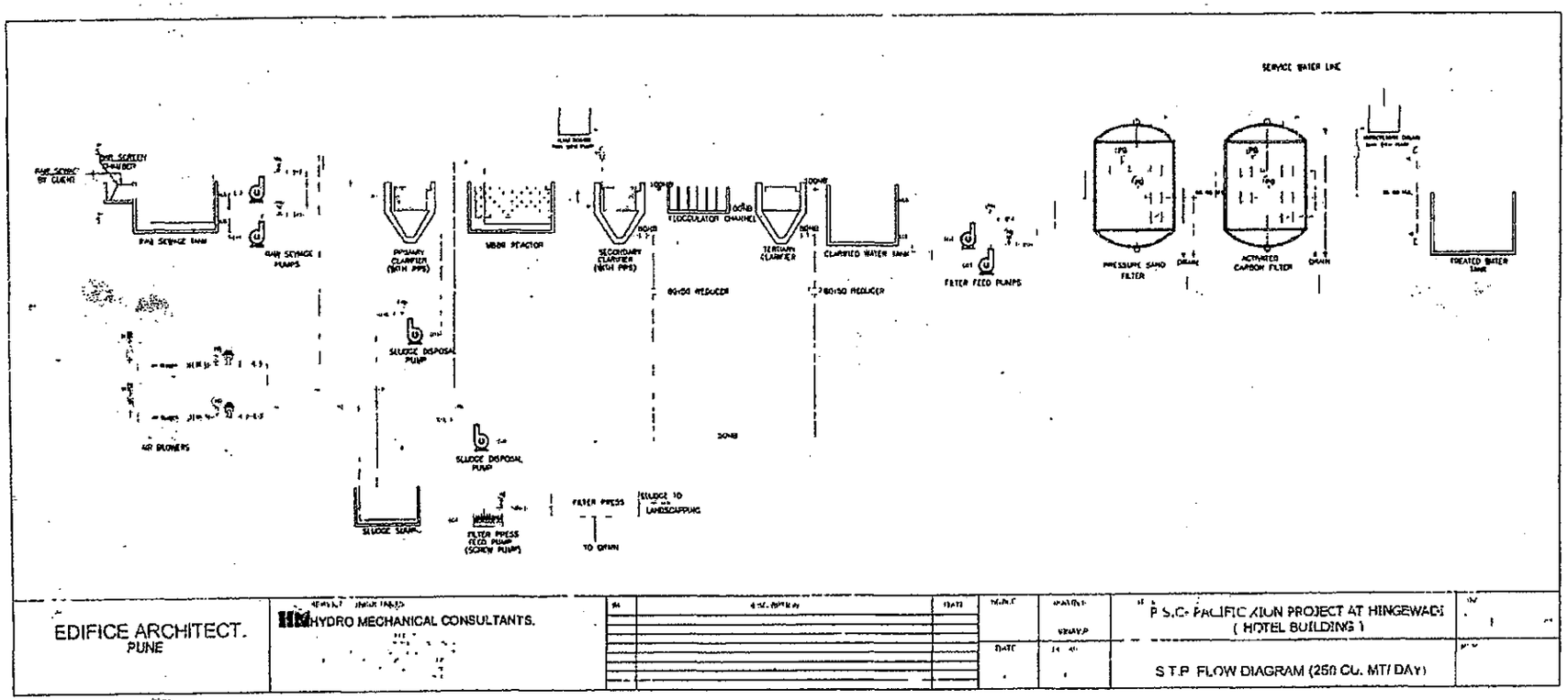
PROJECT IMPACTS –



STP Process Flow Diagram - Mall



STP Process Flow Diagram - Hotel



EDIFICE ARCHITECT. PUNE	HYDRO MECHANICAL CONSULTANTS.			P.S.C. PACIFICATION PROJECT AT HINGEWADI (HOTEL BUILDING)	
				S.T.P. FLOW DIAGRAM (250 CU. MT/ DAY)	

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STP Process & Wastewater Characteristics

- STP technology : Moving Bed Bio Reactor (MBBR), which consists of,
  - Sewage collection and pumping system
  - Manual bar screen and grit chamber
  - Aeration tank and tube deck settlers
  - Filtration system and
  - Disinfection system

PARAMETER	UNITS	IN	OUT	
Nature of Waste water	Domestic Sewage and Kitchen Waste			Quality norms for discharge into Inland surface water mg/l
Avg daily flow	160 & 250 m3/day			
pH	---	6 – 8.5	7 – 7.5	5.5-9.0
Suspended Solids	PPM	200 – 300 mg/lt	< 50	100
BOD 5	PPM	200 – 350 mg/lit	< 5	30
COD	PPM	500 – 700 mg/lit	< 100	250
Odour	---	Medium to Strong	NIL	
Colour	---	Grace Brown	Colourless	
Oil & Grease	---	Up to 50 mg/lit	< 10 mg/lit	
MPN			< 5	

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Layout-Rainwater Harvesting

Rainwater Harvesting

- Storm water runoff
- Area of the Plot: 31,451Sq.m.
- 150mm rainfall/hr and runoff coefficient as 0.45
- Total runoff: 0.58m^3/sec
- Rainwater harvesting: for roof top

Type of Building	Terrace Area (Sq.m)	Rainfall/ day (mm)	Runoff Coefficient	Total Volume (m^3/day)
Mall	3266	50	0.9	147
Anchor	1555	50	0.9	70
Hotel	1528	50	0.9	68

ENVIRONMENT MANAGEMENT PLAN - LAND

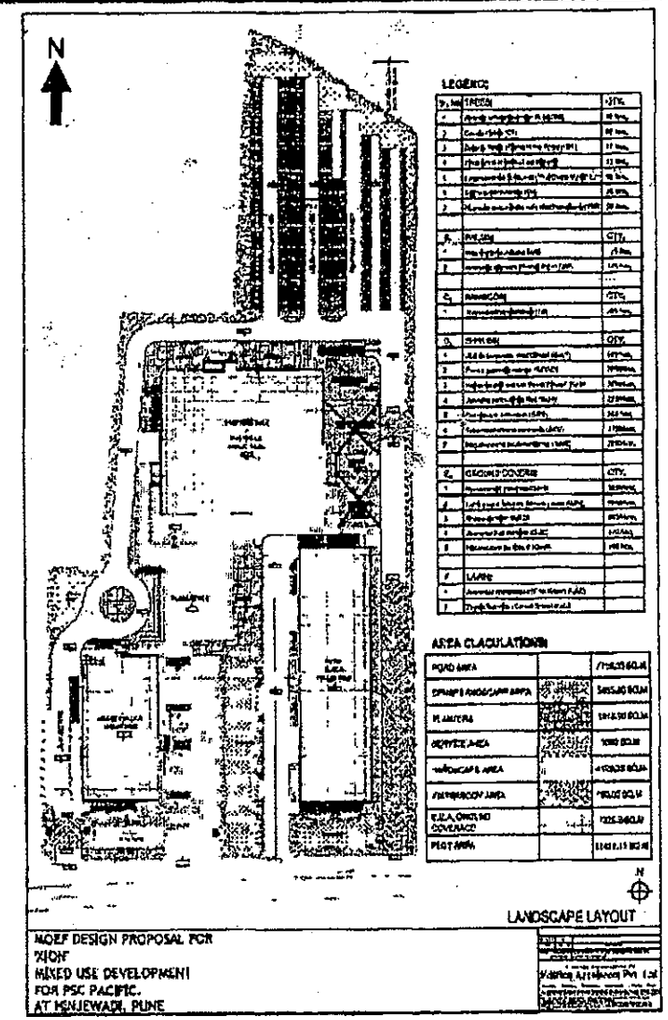
Construction Phase

- Segregation of waste at source
- Reuse of construction wastes like brick bats at the site itself
- Debris generated during construction will be collected at one place and will be disposed off to approved land filling sites
- Using maximum local building materials

Operation Phase

- Segregation of waste at source
- Waste storage in well-designed containers/ bins
- In-vessel composting of biodegradable waste-degraded garbage will be used as manure
- Non biodegradable waste would be handed over to the authorized agencies

LAYOUT - Landscape



PROJECT HIGHLIGHTS – Fire Fighting System

Fire fighting system is designed as per following,

- Tariff Advisory Committee rules for Hydrant
- NFPA Section 14 & 24
- NBC – 1983 Part IV
- TAC – Sprinkler Rules
- NFPA/TAC – Fire Alarm System rules

Fire Fighting system consists of,

- Fire hydrant systems, wet risers
- Sprinkler system
- Landing valves and hose reels; and
- Fire alarm system

Energy Saving

- Boilers
  - Use of high efficiency boilers having efficiency of 92%
- Lighting
  - CFL,
  - Insulation as per ECBC guidelines,
  - AC system with
    - Heat recovery system,
    - Water cooled screw chillers etc.
- Solar water heating on available roof area of 200 Sq.m.

Energy Saving - Hotel

- Air Conditioning
  - Building Management System (BMS) is proposed
  - All motors of HVAC system : connected through BMS
  - Water cooled screw chillers
  - Installation of CO_2 sensors in the basement
  - Side arm condensers to be provided on the chillers to have the hot water for the laundry / washing
- Lighting
  - Use of CFL lamps
  - All public areas with electronic dimmers
  - Service areas, circulation areas and staircase with electronic ballast

Energy Saving - Mall

- Lighting
  - Use of CFL lamps
  - Use of UPS with high input power (close to unity)
  - Use of UPS with harmonic distortion restricted to less than 5%
  - Bus bars in all distribution panels are specified as copper bus bars
  - Copper conductor cables will be specified for sizes of 25 sq. mm and below
  - All cables will be de-rated to avoid heating during use
  - Variable frequency drives will be incorporated on motor feeders which will save considerable energy
  - Solar operated pole lights will be proposed to power pathway lights at some strategic locations
  - Motion sensors & day-light sensors will be provided where ever feasible

Thank You

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ENVIRONMENTAL IMPACT ASSESSMENT OF "XION" – MIXED USE DEVELOPMENT AT HINJEWADI, PUNE

FORM 1

Submitted to

Ministry of Environment and Forests,
New Delhi

Submitted by

M/s PSC Pacific
PSC House, CTS No.111+111/2 Anand Colony,
Dr. Ketkar Road,
Pune 411 004

July 2007

FORM 1

(I) Basic Information

Name of the Project: "Xion"
Mixed use Development Project at Wakad, Pune

Location / site alternatives under consideration: Proposed site is located at Hinjewadi Pune bearing CTS No15/5,15/6,15/7,15/8,16,17/1,17/2/1,17/2/2,17/3,18/1,18/2. Site is situated in the suburbs around 15 km from Pune City. Refer **Annexure I** for the key map showing site location.

Size of the Project: * Xion is being developed on an area of 7.771 acres (31,451 sqm.) of land.

Expected cost of the project: Rs. 150 Crores

Contact Information:

Mr Shrikant Paranjape and
Mr Shashank Paranjape
PSC Pacific
PSC House, CTS No.111+111/2 Anand Colony, Near Suvarnrekha Dinning Hall, Old Karnataka High School Lane, Off Prabhat Road, Pune 411 004.
Fax – 91-20-25460986
Tel – 91-20-30223344
Email – paranjape@bom3.vsnl.net.in

Screening Category: **B2**

**Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)*

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of	Yes	The project site falls into residential and associated with related infrastructure zone as per the new zoning structure by State

	land use (with respect to local land use plan)		Dept. The land use of surrounding area is mixed type. Land use map is enclosed as **Annexure II.**
1.2	Clearance of existing land, vegetation and buildings?	Yes	Existing land being barren land and only small shrubs would be removed, if required.
1.3	Creation of new land uses?	Yes	The land on which "Mixed use Project" is proposed is vacant plot and not many activities were going on during its possession by PSC-Pacific. Taking into consideration the demands for commercial need, Shopping Mall, Hotel and social infrastructure, PSC-Pacific has decided to develop this area and utilize it for commercial use, with the permission of Dept. of Town Planning, Govt. of Maharashtra.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Total 4 nos of bore were sunk at the site so as to know soil profile. A detailed soil investigation report is attached as **Annexure III**
1.5	Construction works?	Yes	The project shall comprise of commercial development of Mall + Multiplex of area 13,280.8Sq.m., Hotel of area 9,520Sq.m. & Anchor shop of 4560.15Sq.m. of area. Total ground coverage will be 25% of net plot area. The site layout plan is attached as **Annexure IV.**
1.6	Demolition works?	No	
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Mostly, local labor will be employed. However, temporary labor camps will be made during the construction phase for about 400 workers.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	The project shall comprise of commercial development of Mall + Multiplex of area 13,280Sq.m., Hotel of area 9520Sq.m. & Anchor shop of 4560.15Sq.m. of area.
1.9	Underground works including mining or tunneling?	Yes	Two levels of basement will be provided for parking as per requirement.
1.10	Reclamation works?	No	
1.11	Dredging?	No	
1.12	Offshore structures?	No	
1.13	Production and manufacturing processes?	No	
1.14	Facilities for storage of goods or materials?	Yes	A temporary shed will be made for the storage of materials during construction as

			per the requirement for the good, which cannot be stored in open space.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	**WASTEWATER** STP of 310.0m^3/ day capacity will be provided. From the total wastewater treated 294m^3/ day will be available for gardening and for A/C makeup. The details of the STP are given as **Annexure V.** **SOLID WASTE** Solid waste management at project site will mainly be contributed by commercial activities. Dry waste like cartons, paper and plastic bags will be generated from the commercial complex in large quantity. The waste management would focus on segregation of waste at source and would be handed over to concerned authority for further processing. Biodegradable fraction of solid waste would be treated at site using 'In Vessel Composting' process. Details are given in **Annexure VI.**
1.16	Facilities for long term housing of operational workers?	No	
1.17	New road, rail or sea traffic during construction or operation?	Yes	
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	
1.20	New or diverted transmission lines or pipelines?	Yes	22 KV line is passing through the project land and the same is being diverted by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) Maharashtra Industrial Development Corporation (MIDC).
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	
1.22	Stream crossings?	No	
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	Water supply to the site would mainly be obtained from MIDC.

1.24	Changes in water bodies or the land surface affecting drainage or run-off?	Yes	The project will involve construction of paved areas and hence the quantity of runoff will increase due to reduced infiltration. The quality will improve. This runoff will be collected through a well-designed storm water network and will be used for artificial recharge of aquifers. Thus, the project will not materially affect the drainage or runoff in the area. Details of runoff are given in **Annexure VII.**
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Number of trucks –8 to 10 trucks per day for a period of 3 years.
1.26	Long-term dismantling or decommissioning or restoration works?	No	
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	NA	
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Proposed project will have commercial activities and involve influx of people. Total pop at peak time in one day is expected to be 3,450. Details of population for various activities are as follows: Commercial : Anchor Shop: 600 Hotel 1200 Mall 700 Multiplex 800 Amenity 50 Floating 100 ***Total: 3,450***
1.29	Introduction of alien species?	No	
1.30	Loss of native species or genetic diversity?	No	
1.31	Any other actions?	No	

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sr. No.	Information/checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	Yes	The site, having area of 7.771 acres, is converted to Non Agricultural (NA) use. As per the zoning structure by state department the area come under residential zone with permitted commercial activities..
2.2	Water (expected source & competing users) unit: KLD	Yes	Total fresh water demand of the project is expected to be around 209.0m^3/day, which will be met from MIDC Makeup water for cooling towers for air – conditioning, gardening, will be provided from treated sewage effluent. Total wastewater to be treated in STP would be 310.0m^3/ day out of which 294m^3/ day would be available for flushing and for A/C makeup water requirements.
2.3	Minerals (MT)	No	
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Cement – 6736MT Steel – 945 MT Stone- 33799 cft Aggregates-288832 cft Source- Local area
2.5	Forests and timber (source – MT)	Yes	3976 cft
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Power required during operation phase will be approximately 2.5MVA, which will be obtained from Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL). During Construction/ implementation phase it is planned to have a constant load of 200kVA. To serve as backup power DG sets are being provided for complex. Emergency power will be available for elevators in

			each building, staircase lighting, passage lighting. Complex will be provided with 100% power backup. Details of the DG sets as follows: 1 DG set of 1500 kVA 4 DG sets of 1000 kVA 1 DG set of 500 kVA 1 DG set of 160 kVA Total fuel consumption per day at peak load when all DG sets are running. (assumed 1 hour operation in one day): 750 lit/hr.
2.7	Any other natural resources (use appropriate standard units)	No	

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	Yes	Waste Oil generated from DG sets. The waste oil generated from DG sets will be stored in sealed containers and will finally be sold to authorized recyclers.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The project will have a positive impact. Round the clock security and power back up will be provided. It will provide employment opportunities to the local people in terms of labor during construction and service personnel during operational phase.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	
3.5	Any other causes	No	

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	
4.2	Municipal waste (domestic and/or commercial wastes)	Yes	0.28+0.13+0.22MT/day*
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	2.7 MT/ year (Assuming one maintenance per year)
4.4	Other industrial process wastes	No	
4.5	Surplus product	No	
4.6	Sewage sludge or other sludge from effluent treatment	Yes	0.025 MT/day*
4.7	Construction or demolition wastes	Yes	During construction 1800MT of waste at the rate of 60 kg/Sq.m.
4.8	Redundant machinery or equipment	No	
4.9	Contaminated soils or other materials	No	
4.10	Agricultural wastes	No	
4.11	Other solid wastes	Yes	0.172 MT/day- Street sweepings* 0.0255 MT/day- Garden and Open space+ 0.173 MT/day- Amenity Facilities~

**- Source – "Manual on Municipal Solid waste management" by Central public Health and Environmental Engineering department (CPHEEO)*

+-Source- Discussion with horticulturists

~ Source- CIWMB

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary[1] or mobile sources	Yes	<table><tr><th>Sr. No.</th><th>Capacity</th><th>PM (g/s)</th><th>SO_2 (g/s)</th></tr><tr><td>1.</td><td>1500kVA</td><td>0.46E-01</td><td>0.30E+00</td></tr><tr><td>2.</td><td>1000 kVA</td><td>0.44E-01</td><td>0.20+E01</td></tr><tr><td>3.</td><td>500kVA</td><td>0.3E-01</td><td>0.11E+00</td></tr><tr><td>4.</td><td>160kVA</td><td>0.11E-01</td><td>0.30E-01</td></tr></table> <table><tr><th>Sr. No.</th><th>Capacity.</th><th>NOx (g/s)</th><th>CO (g/s)</th></tr><tr><td>1.</td><td>1500kVA</td><td>0.89E+00</td><td>0.91E-01</td></tr><tr><td>2.</td><td>1000 kVA</td><td>0.85E+00</td><td>0.87E-01</td></tr><tr><td>3.</td><td>500kVA</td><td>0.102E+01</td><td>0.39E+00</td></tr><tr><td>4.</td><td>160kVA</td><td>0.33E+00</td><td>0.12E+00</td></tr></table> Kindly provide us the locations of DG sets along with their capacities on layout for modeling purpose. Boiler (at the Hotel) : SO_2: 0.05 kg/hr *(Fuel Consumption of Boiler: 500 lit/day LDO)*
5.2	Emissions from production processes	No	There will be emission from the boiler at the proposed hotel which will be negligible since it will be of small capacity.
5.3	Emissions from materials handling including storage or transport	No	
5.4	Emissions from construction activities including plant and equipment	Yes	The emissions from construction activities have been estimated using an emission factor of 1.2 tons SPM/month/acre as per AP-42 Section 13.2.3.3 (US EPA, 1995). The overall SPM emission from the area source with no control is expected to be 1.144×10^{-4} g/m^2/s.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	No	Impact of SPM (dust) generation during the construction phase, will be mitigated by following measures, □ Water all roads used for any vehicular traffic once daily and restrict vehicle speed to 15 mph. □ Apply water to at least 80 percent of the surface areas of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust □ Install a three-sided enclosure with walls with no more than 50 percent porosity that extends, at a minimum, to the top of the pile. □ Downwash of trucks (especially tyres) prior to departure from site.

			Odours can be from STP. However the STP working on appropriate technology, so as to minimize odor problems, will be strategically located so that no adverse impact is caused.
5.6	Emissions from incineration of waste	No	
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	
5.8	Emissions from any other sources	No	

**- Calculated based on MoEF emission limits*
#-Calculated based on oil consumption rate and Sulphur content in the fuel
+-Calculated based on Inter-Ministerial Task Force recommendation for light vehicles

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Noise generation from D.G sets. DG sets will be located strategically and housed in acoustic enclosures so that no adverse impact is caused.
6.2	From industrial or similar processes	No	
6.3	From construction or demolition	Yes	Resultant noise emission level is estimated as 72 dB(A), considering all pertinent equipment to be in operation. See **Annexure VIII.**
6.4	From blasting or piling	No	
6.5	From construction or operational traffic	Yes	The traffic during the construction and operational phases will not have any significant impact.
6.6	From lighting or cooling systems	Yes	Noise generation from D.G sets and cooling systems. DG sets will be placed in an acoustic enclosure and will be strategically located so that no impact is caused.
6.7	From any other sources	No	

** Source- www.gvrd.bc.ca*

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	Waste Oil Generation from DG: 2000 lit/year (Approx) Refrigeration oil About 1000 lit/year (Approx) Diesel, Engine Oil shall be used for DG sets and the same shall stored as per the requirement. Each storage area shall be well equipped with fuel handling and measuring equipments. Hence the risk of contamination of Land or water shall be negligible. The waste oil will be stored in sealed containers and will be sold to authorized recyclers.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	The wastewater generated will be treated on site, in sewage treatment plant with capacity of 310.0m^3/ day. From the total wastewater treated 294m^3/day will be available for gardening, flushing and for A/C makeup water requirements. The extra effluent, if any, will be discharged in the nallah conforming to the CPCB guidelines
7.3	By deposition of pollutants emitted to air into the land or into water	No	The D.G sets have been provided with stacks of sufficient height to disperse the pollutants effectively and thus will not cause deposition on land or water body.
7.4	From any other sources	No	
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	D.G sets will be used as a backup source only.

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or	Yes	LPG (piped): The same shall be stored in isolated Gas Banks located as per the

	production of hazardous substances		requirement. Each Gas Bank shall be equipped with Gas Leak detectors, Fire detection and extinguishing equipments. Diesel storage for DG sets: Diesel shall be stored in Day tanks installed along with DG set as well as underground back up tanks. At each location Fire detection and extinguishing equipments shall be provided.
8.2	From any other causes	No	
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	The site lies in Zone III. The construction will be carried out as per Zone III considerations.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • Housing development • Extractive industries • Supply industries • Other	No	As the site lies in the area designated for IT development, primary facilities of transportation, communication, water supply, streetlights etc are present.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	
9.3	Set a precedent for later developments	Yes	Proposed project will provide high quality hotel, multiplex and convenient shopping as commercial activities. Thus the project aims at providing high quality commercial premises.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	As the site lies in the area designated for IT development, and is already in the process of development

(III) Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Shaniwar Wada	A famous archeological structure of Shaniwar Wada lies at an aerial distance of 15 km
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	
4	Inland, coastal, marine or underground waters	No	
5	State, National boundaries	No	
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	
7	Defense installations	Yes	Khadki ammunition factory about 10 km Central ordnance factory at Dehu road at about 15 km DRDO and HEMRL Pashan at about 8 km
8	Densely populated or built-up area	Yes	Hinjewadi village-in the west at about 0.8km Wakad village boundry- towards north Tathavade village-in the north at about 3km
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	Yes	Mercedes Benz International School (Hinjewadi) at 1.4 km south west
10	Areas containing important, high quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	No	
12	Areas susceptible to natural hazard	No	

	which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*)		

(IV) Proposed Terms of Reference for EIA studies

The proposed terms of reference for EIA studies are as follows:

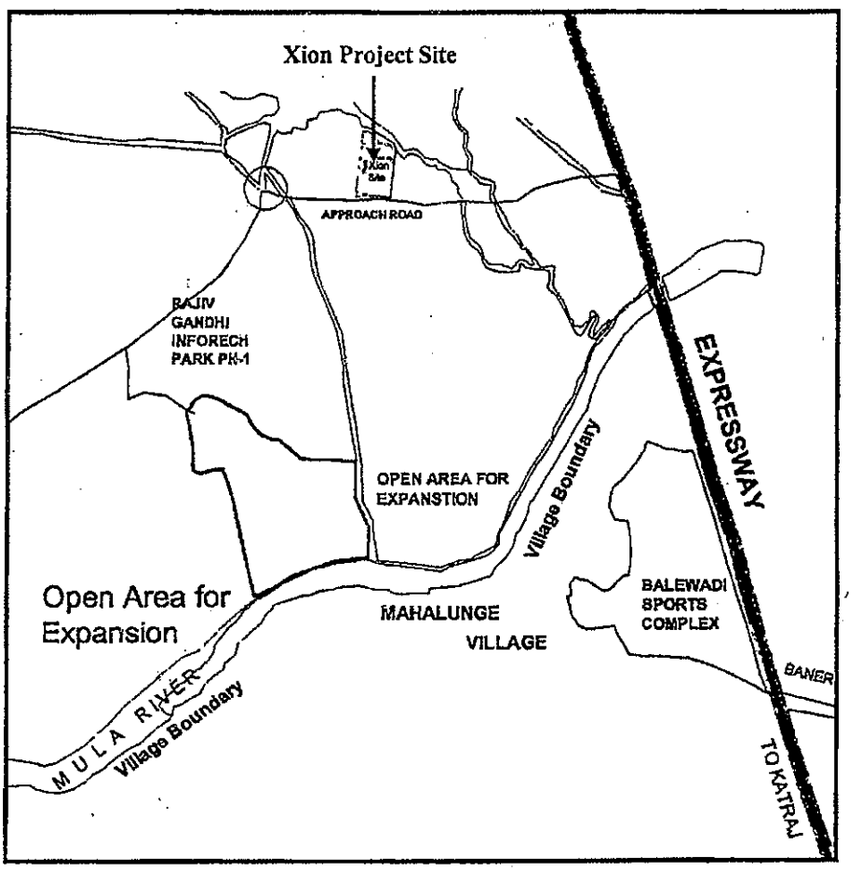
- The monitoring of meteorological parameters like Wind Speed, Wind Direction, Rainfall, Temperature, Relative Humidity, Cloud Cover was carried out at a central location which is representative of the area at an hourly interval for one season
- The air quality monitoring was carried out for SPM, RSPM, SO_2, NOx and CO, at 5 locations, for 24 hourly intervals for 2 days in a week and a total of 12 weeks in a season.
- The water quality for groundwater was assessed using 3 bore well water samples .The monitoring was carried out for the parameters specified in IS: 10500.
- The water quality for surface water was monitored at 1 location for the parameters specified as per the IS: 2296 /CPCB Standard.
- The soil quality was assessed at 3 locations for parameters such as texture, percentage moisture, percentage sand, percentage silt, percentage clay, percentage organic matter, alkalinity, acidity, specific gravity, bulk density etc.
- The ambient noise was monitored at 5 locations for 24 hours over daytime and nighttime.
- Traffic count on one major connecting the site for 24 hours both during weekdays and weekends.

Annexure I

Key Map of the Project Site

ANNEXURE I

KEY MAP OF THE PROJECT SITE



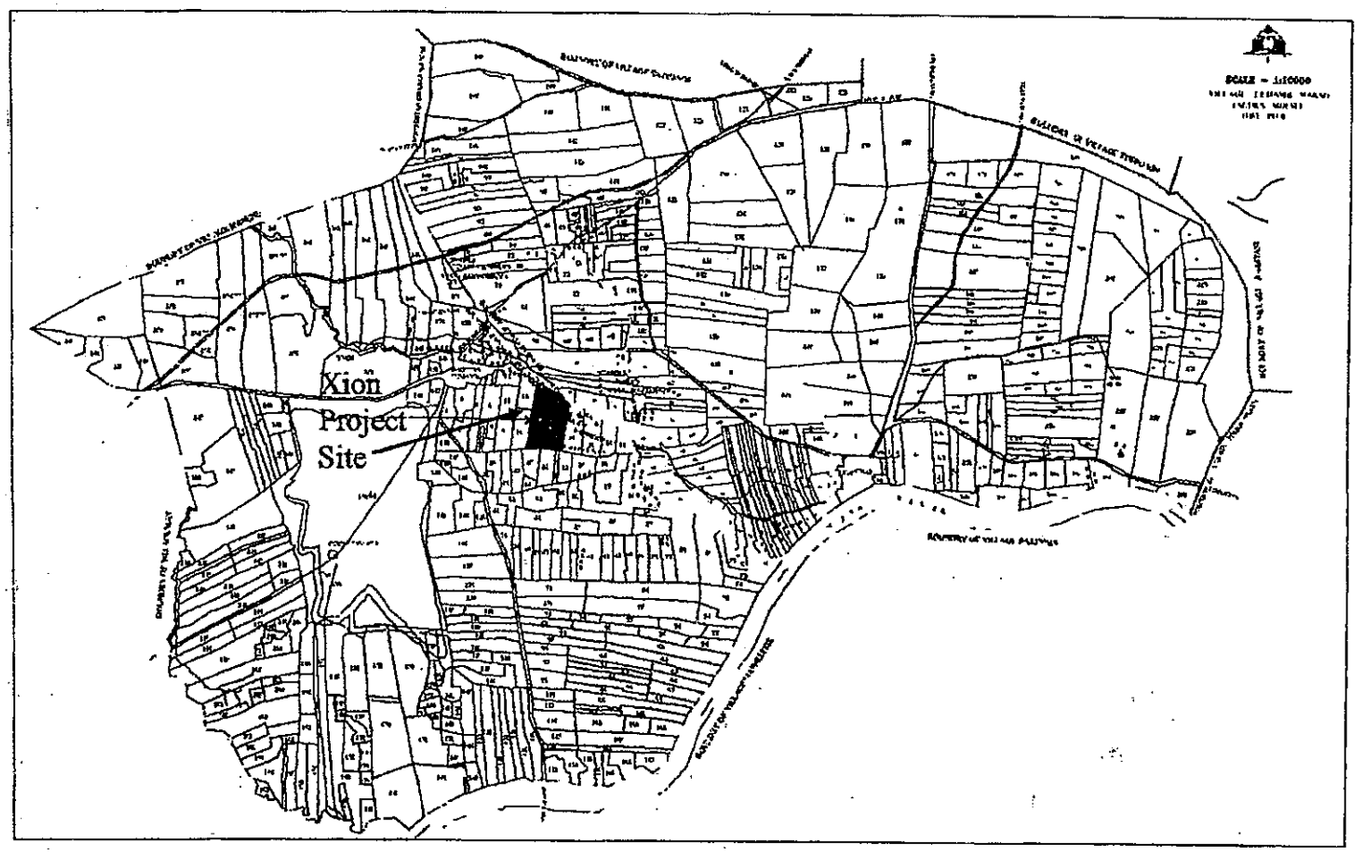
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Annexure II

Land Use Map of the Project Site

ANNEXURE II

LAND USE MAP OF PROJECT SITE



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Annexure III

Pre Construction Investigation Soil & Water

ANNEXURE III

PRE CONSTRUCTION INVESTIGATION - SOIL AND WATER SAMPLE ANALYSIS RESULTS

SOIL QUALITY

Soil samples have been collected from the project site and adjoining locations. Within site one soil sample was taken - (S1). Outside the boundary of Xeon and within the impact zone, 2 more soil samples were collected, namely,

⇒ S2 – Mula River sediment
⇒ S3 – Chaphekar Industrial Estate, MIDC

TABLE 3.1: SOIL CHARACTERISTICS IN THE STUDY AREA

Sr. No.	Parameters (units)	S1	S2	S3
1	Bulk Density (gm/cc)	1.14	0.93	1.16
2	Salinity (ppt)	BDL	BDL	BDL
3	Porosity (%)	84.3	15.9	7.4
4	Texture	Sandy Clay	Clay Loam	Sandy Clay Loam
5	Sand (%)	59.3	25.3	42.3
6	Silt (%)	15.6	32.1	20.9
7	Clay (%)	25.1	42.6	36.8
8	pH (1:10 suspension)	7.36	7.62	7.58
9	Electric conductivity (ms/cm)	0.11	0.13	0.04
10	Cation exchange capacity	16.53	15.53	11.79
11	Sodium (mg/gm)	0.85	0.80	0.68
12	Potassium (%)	0.25	0.24	1.37
13	Sodium Adsorption Ratio	1.85	1.45	1.4
14	Water Holding Capacity (%)	28.7	57.2	35.7
15	Iron (mg/gm)	0.57	0.56	0.27
16	Copper (mg/gm)	0.064	0.065	0.069
17	Zinc (mg/gm)	0.0171	0.0179	0.0171
18	Manganese (mg/kg)	1.23	1.06	1.07
19	Nickel (mg/gm)	0.048	0.04	0.043

BDL – Below Detection Level

Soil analysis results are summarized below:

- Bulk density varies between 0.93 to 1.161gm/cc. Soil texture at all places except the Mula River sample were sandy clay. The texture of soil for Mula River sample was Clay Loam.
- pH ranged from 7.36 to 7.62. At the Project Site, it is slightly alkaline in nature. Water holding capacity of soil varies between 28.7 to 57.2% at all places..
- Zinc, Iron and copper were present in all the soil samples. Nickel and Manganese was found in the range of 0.04 to 0.048 mg/gm and 1.06 to 1.23 mg/gm respectively.
- The Sodium Adsorption Ratio (SAR) indicates the effect of relative cation concentration on sodium accumulation in the soil. The potential of sodium hazards increases in soil with higher SAR values. The analysis shows lower values of SAR at all places between 1.4 to 1.85.

WATER QUALITY

Water samples were collected from following locations:

⇒ WQ1 – Mula River sample
⇒ WQ2 – Bore well at site
⇒ WQ3 – Bore well at Mann village, 3km towards west
⇒ WQ4 – Bore well at Mhalunge village, 3km towards south

TABLE 3.2: WATER QUALITY IN THE SURROUNDING AREA

Sr. No.	Parameters	Unit	WQ1	WQ2	WQ3	WQ4
1.	pH	-	8.25	7.30	7.28	7.15
2.	Colour	-	Colourless	Colourless	Colourless	Colourless
3.	Odour		Odourless	Odourless	Odourless	Odourless
4.	Turbidity	NTU	3.1	2.9	0.9	0.6
5.	Temperature	oC	22°C	24°C	25.2°C	23°C
6.	Total Hardness	mg/l	200	570	690	680
7.	Calcium Hardness	mg/l	105	378	451.5	420
8.	Magnesium Hardness	mg/l	95	192	238.5	260
9.	Total Alkalinity	mg/l	235	360	350	350
10.	Chlorides	mg/l	24.2	165.1	140.8	169.9
11.	Sulphates	mg/l	07	42	118	48
12.	Nitrate	mg/l	2.5	15.5	25	20
13.	Fluoride	mg/l	0.18	0.26	0.26	0.24
14.	Sodium	mg/l	18.4	14	12.1	11.8
15.	Potassium	mg/l	4.6	0.8	0.7	0.8
16.	Total Nitrogen	mg/l	4.02	25	42	32.6
17.	Total Phosphate	mg/l	0.01	N.D.	0.23	0.03
18.	Dissolved oxygen	mg/l	8.7	7.8	7.8	7.7
19.	COD	mg/l	BDL	BDL	35.57	31.62
20.	BOD	mg/l	BDL	BDL	8.5	7.5
21.	Pb	mg/l	BDL	BDL	BDL	BDL
22.	As	mg/l	BDL	BDL	BDL	BDL
23.	Cd	mg/l	BDL	BDL	BDL	BDL
24.	Total Coliforms	/100 ml	33	<2	4	14

BDL: Below Detectable Level

Water quality results are summarized below:

* pH of the well waters in and around the site were slightly alkaline and pH varied between 7.15 – 8.25 with maximum pH of 8.25 for the surface water of Mula river.
* The variation in Total hardness and alkalinity at site wells were very wide. Total hardness varied between a low of 200.0 and high of 690.0. The variation in

alkalinity was 235.0 to 360.0. The total hardness of Mula river water was 200mg/l and alkalinity 235.0mg/l.

* Presence of Nitrate was recorded in all the water samples. However, the nitrate values varied between 2.5 to 25mg/l. High level of nitrate was observed in Bore well at Mann village water of 25mg/l.
* The D. O. values observed in the range of 7.7 to 8.7 mg/l. Mula river sample shows the DO level of 8.7mg/l.
* Salinity in the area was found to be below detection limits and so are the concentrations of Arsenic, Cadmium and Lead.
* Fluoride was observed in all the water samples studied. Fluoride concentration varied between 0.18 to 0.26mg/l.
* Heavy metal like lead, arsenic, cadmium and COD, BOD values were below detection limits.
* Presence of Total Coliform in water samples suggests that water is not suitable for drinking purpose. The total coliform at Mula river was very high, i.e. 33.

SOIL INVESTIGATION REPORT

CLINET NAME	:	M/S. PSC PACIFIC PSC HOUSE, ERANDWANA DR, KETKAR ROAD PUNE
SITE ADDRESS	:	SURVEY NO. 18 (P) HINJEWADI, PUNE.
R. C. C. CONSULTANT	:	M/S. Y.S. SANE & ASSOCIATES 6, AGARKAR BHAVAN L.B. SHASHTRI ROAD, PUNE – 411030.

AGENCY

M/S. STEFON CONSTRUCTIONS

C-4, INDRAYANI COMPLEX,
J. K. SAWANT MARG, DADAR (WEST) MUMBAI.

REPORT ON SOIL INVESTIGATION
AT SURVEY NO. 18 (P), HINJEWADI,PUNE.
FOR M/S. PSC PACIFIC.

SR. NO.	TOPICS
1.	REPORT a. INTRODUCTION b. SOIL PROFILE c. FOUNDATION ASPECTS d. RECOMMENDATIONS
2.	ANNEXURES I. BOREHOLE LOCATION PLAN II. BORELOGS III. SUB-SURFACE PROFILE IV. LABORATORY TEST REXULTS

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V. T. GANPULE & ASSOCIATES
GEOTECHNICAL & GROUND ENGINEERING CONSULTANTS

REF/VTGA/06/01/310 DATE :- 5TH Jan,2006

REPORT ON SOIL INVESTIGATION

AT SY. NO. 18 (P), HINJEWADI,PUNE.

FOR M/S. PSC PACIFIC

INTRODUCTION :-

M/s. PSC Pacific are proposing multistoried building on plot bearing Sy. No. 18 (P), Hinjewadi, Pune. **M/s. Y.S. Sane & Associates** are the Structural Consultants for the project. Four numbers of bores were sunk by **M/s. Stefon Constructions** in accordance with the investigation scheme framed by consultants. The bores were developed by rotary wash boring techniques. At regular intervals SPT test were conducted in overburden layer. The profile revealed by the trial boreholes is described below followed by discussion in foundation aspects.

It may please be noted that the detailed structural design of foundation is not contemplated in the report. The report is aimed at providing general information regarding the Geotechnical aspects of subsoil formations from safe bearing capacity and settlement point of view.

SOIL PROFILE :-

There is a thin layer of brownish clay with a stiff consistency. The thickness varies from bore to bore. In borehole no. 3 the thickness of the clay is maximum of the order of 5.9 meters while in boreholes no.4 it is hardly 50 cm. The SPT values upto

C-4, INDRAYANI COMPLEX, GR. FLR., J. K. SAWANT MARG, DADAR (W), MUMBAI - 400 028.
TEL. : 2436 8048, 2438 5189 TELEFAX : 2433 2248
E-Mail : vtgasso@hotmail.com

1 P4

2 meters to 3 metres are between are N = 17 to N = 23 while in borehole no.3, from three metes onward the consistency of the clay nearly reaches that of murrum with N more than 40.

Below the overburden clayee soil the reddish coloured rock with a recovery around 30 % to 40 % in the upper couple of meter is observed. Geologically speaking rock can be described as basaltic in nature. From 7 meters below ground level the recovery improves and so also the RQD. The boreholes were extended (except BH No. 4 sufficiently deep to establish the continuity of the formation .

FOUNDATION ASPECTS :-

The clients intent to tackle the first phase of a large construction activity. The expected loads on columns will be of tall order. Fortunately except in borehole no. 3.all the boreholes show the striking of the basaltic rock in a depth range of 3 to 4 metres. In borehole no.3 the rock is noted at about 5.9 metres below G.L But there also excavation to the tune of 6 metres can be done without problem as ground water level is at a depth of 4.75 metres and ample open space is available so as to ensure proper slope and step in between, during the excavation. The footing resting on basaltic rock met around 3 to 4 metres may be designed with 70 T/m2 as a S.B.C. value. It is advisable to provide a seat of 50 cm to each footing in the rock.

Now a days poklain is deployed for mass excavation the use of poklain may be stopped on reaching the rock and excavation required for seating the footings may be done manually.

Since the excavation is of deeper order in area near borehole no.3 basement may be contemplated (if feasible and permissible cost wise)

The probable settlement of the formation under loading intensity of 70 T/m^2 will be hardly between 5 to 10 mm which is well within the limits. It is suggested to monitor the settlement during the construction as such data will be very useful in modifying the S.B.C in the future building in view of large size project envisaged

RECOMMENDATIONS :-

Opt for open footing resting on basalt met at 3 to 4 metres in general (except BH No.3). The footings may be seated for 50 cms in basalt.

The footing may be designed with 70 t/m^2 as a S.B.C. value.

The expected settlement will be in the range of 5 to 10 mm under the proposed safe end bearing capacity.

The enclosed borelogs and laboratory results complete the result.

(V. T. GANPULE)
B.E. (Civil), M.E. (Soil Mech. & Found. Engg.)
F.I.E., F.I.G.S.,

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I

BOREHOLE LOCATION PLAN

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SLEFO CONSTRUCTIONS

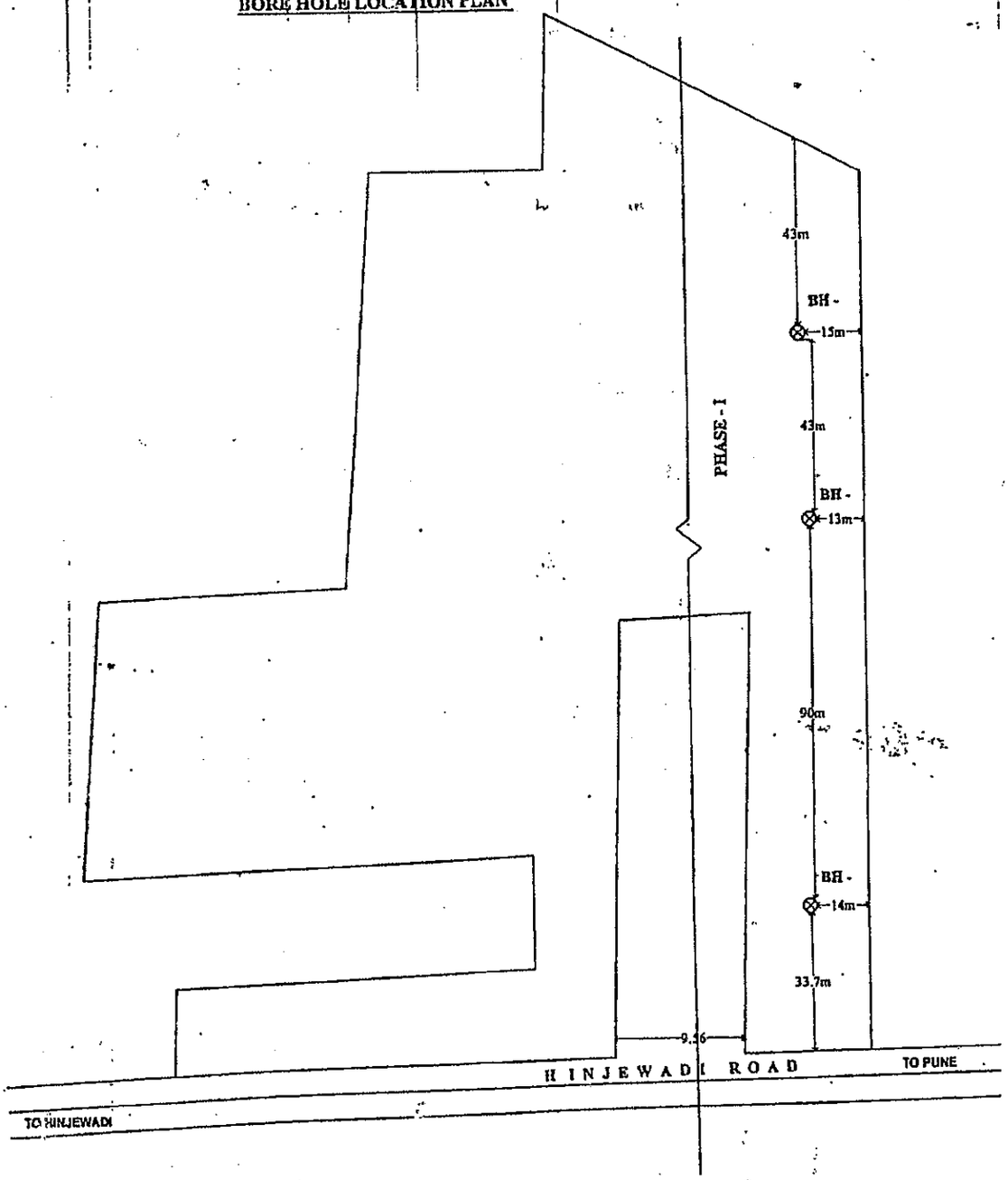
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CLIENT : M/S. PSC PACIFIC

SITE : SY NO. 18 (P), HINJEWADI, PUNE

BORE HOLE LOCATION PLAN



II

BORE HOLE LOGS

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STEFON CONSTRUCTIONS

CLIENT NAME : M/S. PSC PACIFIC
PSC HOUSE, ERANDWANA, DR KETKAR ROAD, PUNE.
LOCATION : SURVEY NO. 18 (P),
HINJEWADI, PUNE.

DATE OF COMMENCEMENT : 25-11-2005
DATE OF COMPLETION : 27-11-2005
GROUND WATER LEVEL : 4.55 M.
FINAL DEPTH : 9.40 M

BORE HOLE NO : ONE

BORE HOLE LOG

BORE DEPTH IN (M)	DEPTH FROM EGL IN (M)	THICKNESS OF LAYER	LOG	VISUAL DESCRIPTION OF STRATA	FIELD TEST	TYPE OF SAMPLE	CORE DRILLING: CORE PIECES	CORE DRILLING: RECOVERY % (25 50 75 100)	CORE DRILLING: R.Q.D. % (25 50 75 100)	REMARKS: WASH WATER COLOUR
0.00										BROWNISH
1.00										
2.00				BROWNISH CLAY	DEPTH 1.50 M. TO 2.10 M. CMS 15 15 15 15 BLS 06 07 10 11 N =17	WS-1 SPT-1		41.66		
3.00	3.60	3.60			DEPTH 3.00 M TO 3.60 M CMS 15 15 15 15 BLS 07 09 11 13 N =20	WS-2 SPT-2 WS-3		33.33		
4.00								33.33	NIL	
5.00				REDDISH GREY ROCK			1 - 9 & S.P.			
6.00	6.60	3.00					10 - 18 & S.P.	40	NIL	
7.00								50	NIL	
8.00				BROWNISH GREY ROCK			19 - 28 & S.P.			
9.00	9.40	2.80					29 - 39 & S.P.	77.27	18.18	
10.00				BORE HOLE TERMINATED AT 9.40 mtr.						
11.00										
12.00										
13.00										
14.00										

STEFON CONSTRUCTIONS

ABBRV

WS	:	WASH SAMPLE	EGL	: EXISTING GROUND LEVEL	DS	:	DISTURBED SAMPLE
UDS	:	UNDISTURBED SAMPLE			SPT	:	STANDARD PENETRAITION TEST
S.P.	:	SMALL PIECES			B	:	'NX' DOUBLE TUBE CORE BARREL

C-4, INDRAYANI COMPLEX, GR. FLOOR,
J.K. SAWANT MARG, DADAR (W), MUMBAI - 28.
TEL.: 24368048 / 24385189 • TEL. FAX : 2433 2248
E-mail : stefon@vsnl.net

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STEFON CONSTRUCTIONS

CLIENT NAME : M/S. PSC PACIFIC
PSC HOUSE, ERANDWANA, DR. KETKAR ROAD, PUNE.
LOCATION : SURVEY NO. 18 (P),
HINJEWADI, PUNE.

DATE OF COMMENCEMENT : 26-11-2005
DATE OF COMPLETION : 27-11-2005
GROUND WATER LEVEL : 4.60 M.
FINAL DEPTH : 9.90 M

BORE HOLE NO : TWO

BORE HOLE LOG

BORE DEPTH IN (M)	DEPTH FROM EGL IN (M)	THICKNESS OF LAYER	LOG	VISUAL DESCRIPTION OF STRATA	FIELD TEST	TYPE OF SAMPLE	CORE DRILLING: CORE PIECES	CORE DRILLING: RECOVERY % (25 / 50 / 75 / 100)	CORE DRILLING: R.Q.D. % (25 / 50 / 75 / 100)	REMARKS: WASH WATER COLOUR
0.00										
	2.80	2.80		BROWNISH CLAY	DEPTH 1.50 M TO 2.10 M. CMS 15 15 15 15 BLS 05 06-07 10 N = 13	WS-1 SPT-1 WS-2		100		
	7.30	4.50		BROWNISH GREY ROCK			1 - 11 & S.P. 12 - 18 & S.P. 19 - 25 & S.P.	33.33 40 46.66	NIL 11.33 18	BROWNISH
	9.90	2.60		GREYISH ROCK			26 - 33 & S.P. 34 - 37 & S.P.	63.33 95.45	32 89.09	
10.00				BORE HOLE TERMINATED AT 9.90 mtr.						
11.00										
12.00										
13.00										
14.00										

STEFON CONSTRUCTIONS

ABBRV

WS	:	WASH SAMPLE	EGL	: EXISTING GROUND LEVEL	DS	:	DISTURBED SAMPLE
UDS	:	UNDISTURBED SAMPLE			SPT	:	STANDARD PENETRAITION TEST
S.P.	:	SMALL PIECES			B	:	'NX' DOUBLE TUBE CORE BARREL

C-4, INDRAYANI COMPLEX, GR. FLOOR,
J.K. SAWANT MARG, DADAR (W), MUMBAI - 28.
TEL.: 24366048 / 24385189 • TEL. FAX : 2433 2248
E-mail : stefon@vsnl.net

STEFON CONSTRUCTIONS

CLIENT NAME	M/S. PSC PACIFIC	DATE OF COMMENCEMENT	: 25-11-2005
	PSC HOUSE, ERANDWANA, DR. KETKAR ROAD, PUNE.	DATE OF COMPLETION	: 28-11-2005
SITE LOCATION	SURVEY NO. 18 (P),	GROUND WATER LEVEL	: 4.75 M.
	HINJEWADI, PUNE.	FINAL DEPTH	: 11.60 M

BORE HOLE NO. : THREE

BORE HOLE LOG

CASING	BORE DEPTH IN (M)	DEPTH FROM EGL IN (M)	THICKNESS OF LAYER	LOG	VISUAL DESCRIPTION OF STRATA	FIELD TEST	TYPE OF SAMPLE	CORE DRILLING: CORE PIECES	CORE DRILLING: RECOVERY % (25 50 75 100)	CORE DRILLING: R.Q.D. % (25 50 75 100)	REMARKS: WASH WATER COLOUR
100mm Ø	0.00										BROWNISH
	1.00					DEPTH 1.50 M. TO 2.10 M.	WS-1		75		
	2.00					CMS 15 15 15 15	SPT-1				
						BLS 07 10 13 20 N =23			66.66		
	3.00				BROWNISH CLAY	DEPTH 3.00 M. TO 3.60 M.	WS-2				
						CMS 15 15 15 15	SPT-2				
	4.00					BLS 08 18 23 25 N =41					
						DEPTH 4.50 M. TO 5.10 M.	WS-3				
	5.00					CMS 15 15 15 15	SPT-3		58.33		
		5.90	5.90			BLS 09 19 25 28 N =44					
	6.00				BROWNISH GREY ROCK				54.66	12	
		7.40	1.50					1 - 16 & S.P.			
	7.00								68.66	60	
	8.00							17 - 21 & S.P.			
	9.00				GREYISH ROCK				93.33	60	
	10.00							22 - 27 & S.P.			
	11.00								91.66	80	
		11.60	4.20					28 - 31 & S.P.			
	12.00				BORE HOLE TERMINATED AT 11.60 mtr.						
	13.00										
	14.00										

STEFON CONSTRUCTIONS

ABBRV

WS	:	WASH SAMPLE	EGL	: EXISTING GROUND LEVEL	DS	:	DISTURBED SAMPLE
UDS	:	UNDISTURBED SAMPLE			SPT	:	STANDARD PENETRAITION TEST
S.P.	:	SMALL PIECES.			B	:	'NX' DOUBLE TUBE CORE BARREL

C-4, INDRAYANI COMPLEX, GR. FLOOR,
J.K. SAWANT MARG, DADAR (W), MUMBAI - 28.
TEL.: 24366048 / 24365189 • TEL. FAX : 2433 2248
E-mail : stefon@vsnl.net

STEFON CONSTRUCTIONS

CLIENT NAME	M/S. PSC PACIFIC	DATE OF COMMENCEMENT	26-11-2005
	PSC HOUSE, OFF PRABHAT ROAD, PUNE.	DATE OF COMPLETION	27-11-2005
LOCATION	SURVEY NO. 18 (P),	GROUND WATER LEVEL	NIL
	HINJEWADI, PUNE.	FINAL DEPTH	1.50 M

BORE HOLE NO : FOUR

BORE HOLE LOG

PAGE NO. - 1

BORE DEPTH IN (M) 0.00	DEPTH FROM EGL IN (M)	THICKNESS OF LAYER	LOG	VISUAL DESCRIPTION OF STRATA	FIELD TEST	TYPE OF SAMPLE	CORE DRILLING: CORE PIECES	CORE DRILLING: RECOVERY % (25 50 75 100)	CORE DRILLING: R.Q.D. % (25 50 75 100)	REMARKS: WASH WATER COLOUR
1.00	0.80	0.80		BROWNISH CLAY						BROWNISH
	1.50	0.70		BROWNISH WHITE ROCK			1 - 4 & S.P.	71.42	15.71	
2.00				BORE HOLE TERMINATED AT 1.50 mtr.						
3.00										
4.00										
5.00										
6.00										
7.00										
8.00										
9.00										
10.00										
11.00										
12.00										
13.00										
14.00										

STEFON CONSTRUCTIONS

ABBRV

WS	:	WASH SAMPLE	EGL	: EXISTING GROUND LEVEL	DS	:	DISTURBED SAMPLE
UDS	:	UNDISTURBED SAMPLE			SPT	:	STANDARD PENETRATION TEST
S.P.	:	SMALL PIECES			B	:	'NX' DOUBLE TUBE CORE BARREL

C-4, INDRAYANI COMPLEX, GR. FLOOR,
J.K. SAWANT MARG, DADAR (W), MUMBAI - 28.
TEL.: 24368048 / 24385189 • TEL. FAX : 2433 2248
E-mail : stefon@vsnl.net

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III

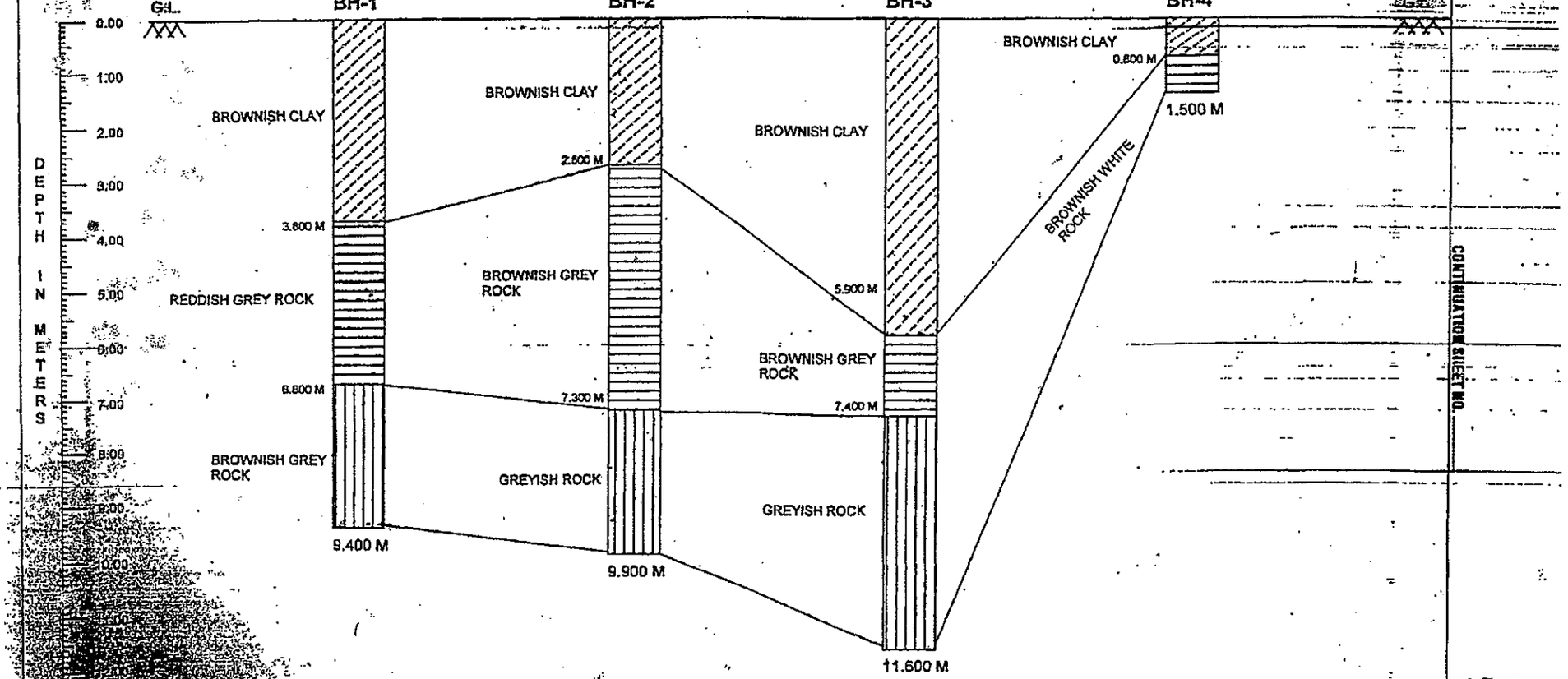
SUB-SURFACE PROFILE

CLIENT NAME :- M/S. PSC PACIFIC

SITE LOCATION :- SURVEY NO. 18 (P), HINJEWADI, PUNE.

Note: For Detailed Description of strata please refer Borelogs

SUB SURFACE PROFILE OF BOREHOLE LOGS



IV

LABORATORY TEST RESULTS

ENLAB SERVICES

13/2149, Santa Nagar, Road No. 6, Kandivali (East), Mumbai - 400 101.
Tel. (Lab.) : 2885 6465

Our Ref. : ES /Rock/05/5248 Date : 26/12/2005

TEST REPORT OF ROCK SAMPLE

AGENCY : M/s. Stefon Constructions, Mumbai.

CLIENT : M/s. PSC Pacific

SITE : Survey No. 18 (P),
Hinjewadi, Pune.

Point Load Test

SR. NO.	Bore Hole No. / Sample No.	BH - 2 / P - 13	BH - 3 / P - 12
	Depth (mtr)	4.50 - 4.69	6.10 - 6.15
1	Specimen Dia (Cm)	5.40	5.30
2	Length (Cm)	8.90	8.00
3	Dry Weight in Kgs	0.476	0.456
4	SSD Wt in Kgs	0.486	0.464
5	Point Load (Kgs)	13	25
6	Point Load Strength Index kg/cm2	0.20	0.41
7	Uniaxial Comp. Strength Kg/Cm2	4.38	9.02
8	Water Absorption %	2.101	1.754
9	Dry Density Gm/cc	2.336	2.585
10	SSD Density Gm/cc	2.386	2.630
11	Porosity %	4.909	4.535
12	Specific Gravity	2.457	2.708

Note: 1) Results are valid for samples submitted by the contractor.

FOR ENLAB SERVICES

ENLAB SERVICES MUMBAI.

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ENLAB SERVICES

113/2149, Samta Nagar, Road No. 6, Kandivali (East), Mumbai - 400 101.
Lab : 2885 6466

Our Ref : ES /Rock/05/5248

DATE : 26/12/2005

TEST REPORT OF ROCK SAMPLES

AGENCY : M/s. Stefon Constructions, Mumbai.

CLIENT : M/s. PSC Pacific

SITE : Survey No. 18 (P),
Hinjewadi, Pune.

SR. NO.	Bore Hole No / Piece	BH- 1 / P -13	BH-2 / P - 13	BH- 3 / P - 16
	Depth (mtr)	5.60 - 5.70	4.50 - 4.69	7.22 - 7.40
1	Specimen Dia(CM)	5.30	5.40	5.40
2	Length(CM)	9.40	10.80	10.80
3	Dry Weight(Kgs)	0.484	0.628	0.666
4	SSD Wt(Kgs)	0.496	0.644	0.676
5	Crushing Load (MT)	1.73	2.71	8.03
6	Comp.Strength(Kg/Cm2)	78.46	118.39	350.80
7	Water Absorption %	2.479	2.548	1.502
8	Dry Density Gm/cc	2.335	2.540	2.694
9	SSD Density Gm/cc	2.393	2.605	2.734
10	Porosity %	5.789	6.472	4.045
11	Specific Gravity	2.479	2.716	2.808

Note : Results are valid for samples submitted by the contractor

FOR ENLAB SERVICES

ENLAB SERVICES MUMBAI.

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PatChem Laboratories

Tel. : 2684 5224
Fax : 2684 6363
Cell : 9820066842
E-mail : pat_chem@vsnl.net

Soil, Water, Rock, Concrete & Construction Material Testing for Physical, Chemical, Bacteriological, Electrochemical & Mechanical Parameters

Raja Market, 1st Floor, New Nagardas Road, Andheri (East), Mumbai - 400 069.

Ref. STEFON / Pat / Lab. No. Dec – 149 – 150 / 2005. DATE : 21.12.2005.

CERTIFICATE OF ANALYSIS

NAME OF THE PARTY : M/s STEFON CONSTRUCTIONS MUMBAI

NATURE OF SAMPLE : WATER

CLIENT : M/s PSC Pacific .

Site : Survey No. 18 (P) Hinje WADI PUNE.

RESULTS OF ANALYSIS

SAMPLE DETAILS	pH By digital pH Meter	CHLORIDE as cl	SULPHITE as So3	Organic matter
BH No. 2 Final Depth 9.90 m GWL 4.60m	7.30	110 PPM	040 PPM	022 PPM
BH No. 3 Final depth 11.60m G.W.L.4.75m	7.48	120 PPM	036 PPM	020 PPM
LIMITS AS PER 456	6.50 – 8.30	1000 PPM	400 PPM	50 PPM

ANALYSED BY :

PAT-CHEM LABORATORIES MUMBAI ESTD 1984

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Annexure IV

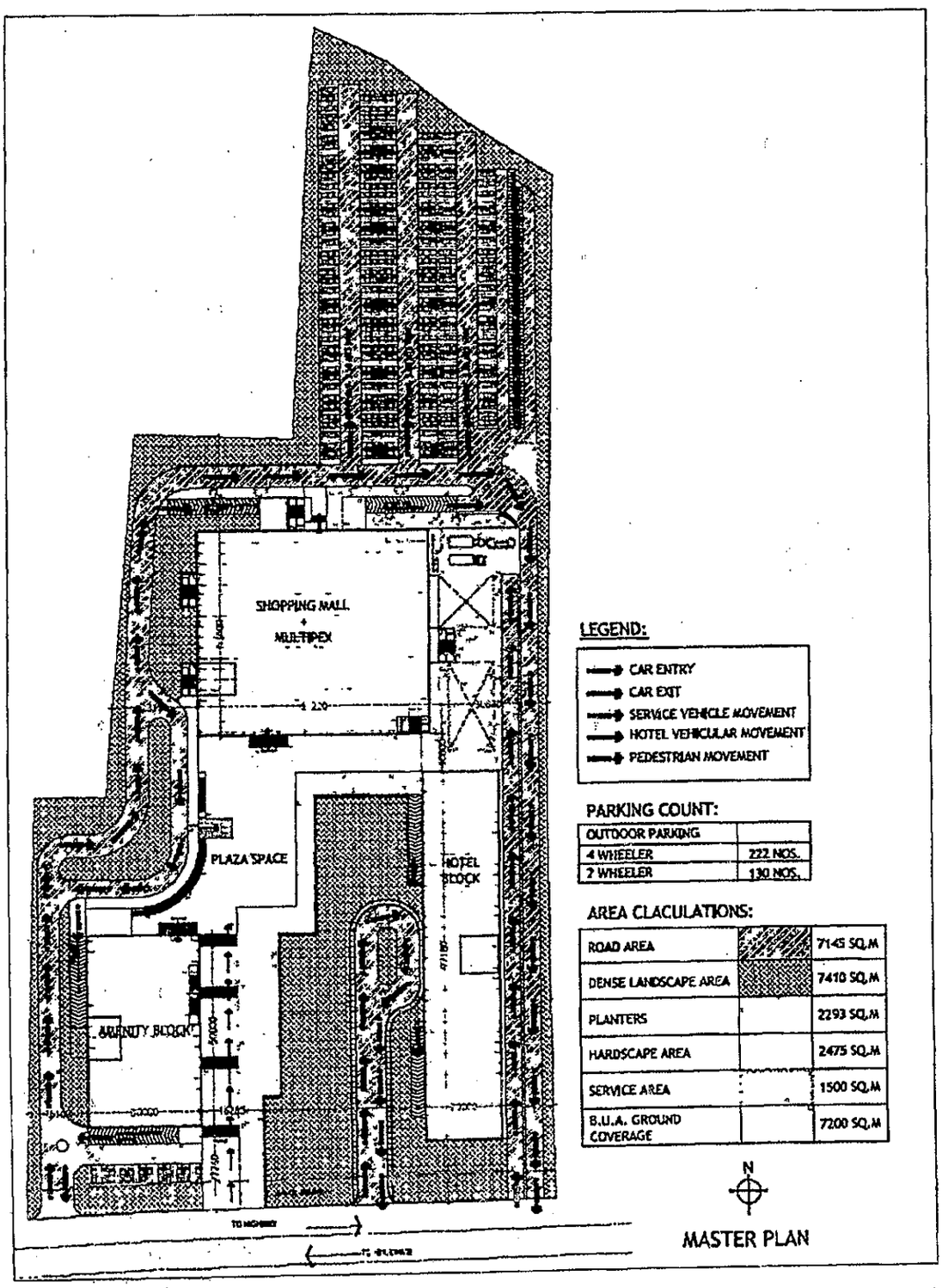
Proposed Layout

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ANNEXURE IV

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PROPOSED LAYOUT OF XION SITE



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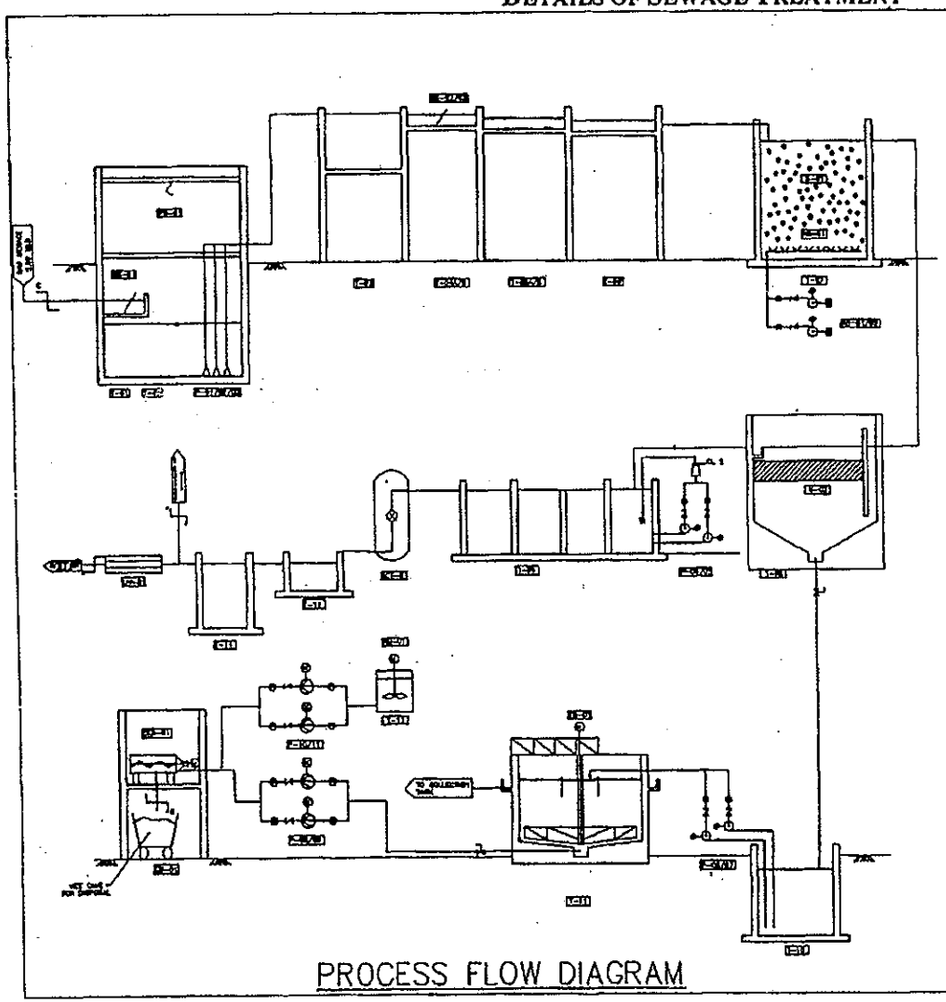
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Annexure V

STP Details

ANNEXURE V

DETAILS OF SEWAGE TREATMENT

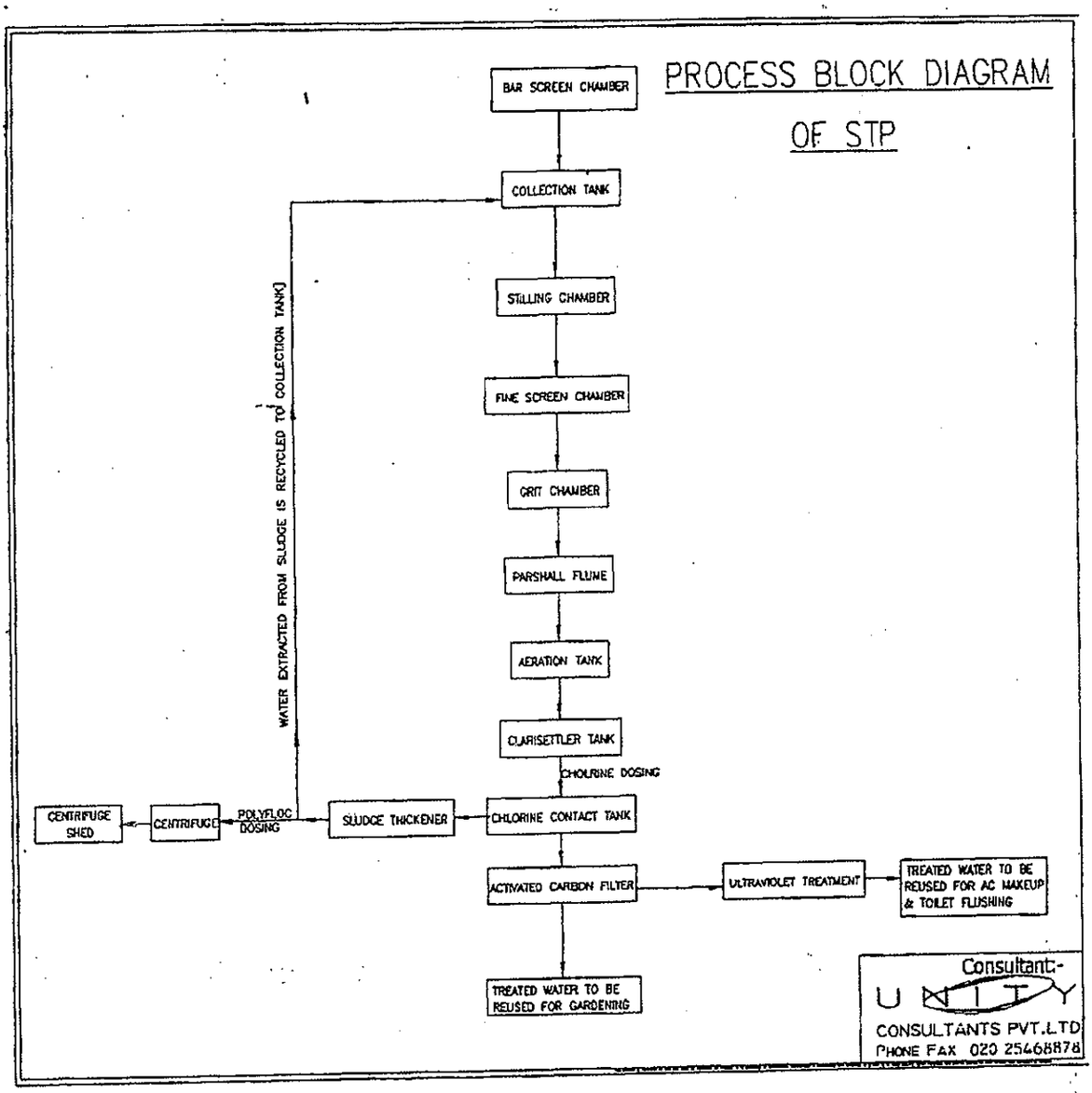


PROCESS FLOW DIAGRAM

TAG NO.	ITEM	QTY.
LIST OF CIVIL UNITS		
T-01	BAR SCREEN CHAMBER	1
T-02	COLLECTION TANK	1
T-03	STILLING CHAMBER	1
T-04A/B	FINE SCREEN CHAMBER	2
T-05A/B	GRIT CHAMBER	2
T-06	PARSHALL FLUME CHANNEL	1
T-07	AERATION TANK	1
T-08	CLARISETTER TANK	1
T-09	CHLORINE CONTACT TANK	1
T-10	SLUDGE SUMP	1
T-11	SLUDGE THICKENER	1
T-12	NEUTRALIZATION PIT	1
CH-01	CENTRIFUGE SHED	1
PH-01	PUMP HOUSE	1
T-14	TREATED WATER COLLECTION TANK	1
LIST OF MECHANICAL UNITS		
BS-01	COARSE SCREEN	1
BS-02/03	FINE SCREEN	2
P-01/02/03	FEED PUMP	3
P-04/05	BOOSTER PUMP	2
P-06/07	THICKENER FEED PUMP	2
P-08/09	CENTRIFUGE FEED PUMP	2
P-10/11	POLYFLOCK DOSING PUMP	2
AB-01/02	AIR BLOWER	2
AD-01	AIR GRID	LOT
TH-01	THICKENER MECHANISM	1
T-13	POLYFLOCK DOSING TANK	1
CEN-01	CENTRIFUGE	1
AGI-01	POLY. DOS. TK. AGITATOR	1
M-01	AERATION TANK MEDIA	LOT
M-02	SETTLING TANK MEDIA	LOT
ACF-01	ACTIVATED CARBON FILTER	1
UV-01	ULTRAVIOLET TREATMENT	1

Consultant:-
UNITY
CONSULTANTS PVT. LTD.
PHONE/FAX 020-24468...

PROCESS BLOCK DIAGRAM



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DESIGN BASIS

The Sewage Treatment Plant (STP) is designed to treat the raw wastewater generated from residential, commercial area having following characteristics:

Water Consumption	135 L / Capita / Day
Wastewater generation	85%

Inlet Parameters

pH	6.5 – 8.5
BOD	250 mg/l
COD	550 mg/l
Suspended Solids	200 mg/l

Outlet Parameters
After biological treatment (for disposal)

pH	6.5 – 8.5
BOD	≤ 30 mg/l
COD	≤ 250 mg/l
Suspended Solids	≤ 100 mg/l

Process Brief

The raw sewage generated will be passed through the BAR SCREEN CHAMBER wherein the coarse, floating solids like leaves, rocks, branches, plastics and rags, etc. will be trapped and removed manually. The effluent will be then collected in the COLECTION TANK wherein the wastewater will be collected by gravity and pumped into downstream units. The tank is provided with coarse bubble, aeration to avoid settling of suspended solids and putrefaction of wastewater.

The effluent will be then pumped to STILLING CHAMBER through FEED PUMPS to reduce its velocity before entering further treatment operations. The effluent will be then passed through FINE SCREEN CHAMBER wherein fine particles like small paper, plastic materials of various types, razor blades, grit, feces etc. are removed.

The effluent after screening will be passed through GRIT CHAMBER wherein the materials having specific gravity or settling velocities greater than that of organic materials is passed. It is necessary to remove to avoid abrasion and abnormal wear and tear of the moving mechanical equipments.

The effluent will be then passed through PARSHALL FLUME where the velocity of effluent is maintained. PARSHALL FLUME itself acts as a measuring device of velocity and it also develops a hydraulic jump.

The effluent is then pumped into the AERATION TANK wherein the attached, aerobic microbes will utilize the pollutant in presence of oxygen thereby reducing BOD/COD. The biomass generated in aeration tank will be separated in the CLARISETTLER TANK and clear supernatant will flow by gravity. The treated wastewater will be dosed with liquid Chlorine and allowed to react in CHLORINE CONTACT TANK. The treated wastewater will be pumped through Activated Carbon Filter. Part of treated water from ACTIVATED CARBON FILTER will be given UV TREATMENT prior to be used for AC makeup & toilet flushing and remaining treated water will be used for gardening, etc.

The dead biomass separated will be taken in the SLUDGE SUMP. From Sludge Sump the sludge is pumped to SLUDGE THICKENER unit wherein sludge is dewatered or greater amount of water is removed from sludge. The water extracted from the sludge is again recycled to the COLLECTION TANK which results in a larger recirculation of these fine solids. The thickened sludge will be further pumped to CENTRIFUGE through centrifuge pumps where Polyflock dosing is done which accelerate the function of further sludge thickening, which is then led to CENTRIFUGE SHED.

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Annexure VI

In Vessel Composting Process

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ANNEXURE VI

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'IN VESSEL COMPOSTING PROCESS

Principle of the process

1. Whatever can be recycled, must be recycled,
2. Whatever can be composted must be composted,
3. Hazardous, bio-medical and industrial solid waste must not find way into MSW and
4. Whatever is inert only may go for sanitary landfill.

Objective of the process

1. To treat biodegradable fraction of Municipal Solid Waste (MSW)so as to mitigate the problems associated with MSW like foul odour, spread of disease and uncleanliness.
2. To produce valuable organic fertilizer.
3. To recover valuable material.
4. Reduce the load on landfill.

Procedure

1. The segregated solid waste arrives at 'TIVAS BIO-COM' process site.
2. Biodegradable matter undergoes size reduction through a shredder.
3. TIVAS Vessels are used in the project.
4. Everyday suitable microbial inoculant is mixed with shredded biodegradable matter.
5. The biodegradable matter will remain in the vessel for 5 days (minimum).
6. The organic fertilizer is taken out from vessel after 5 days.
7. After maturation for about 10 days, the organic fertilizer is enriched with suitable microbial inoculant.
8. Suitable microbial inoculant.

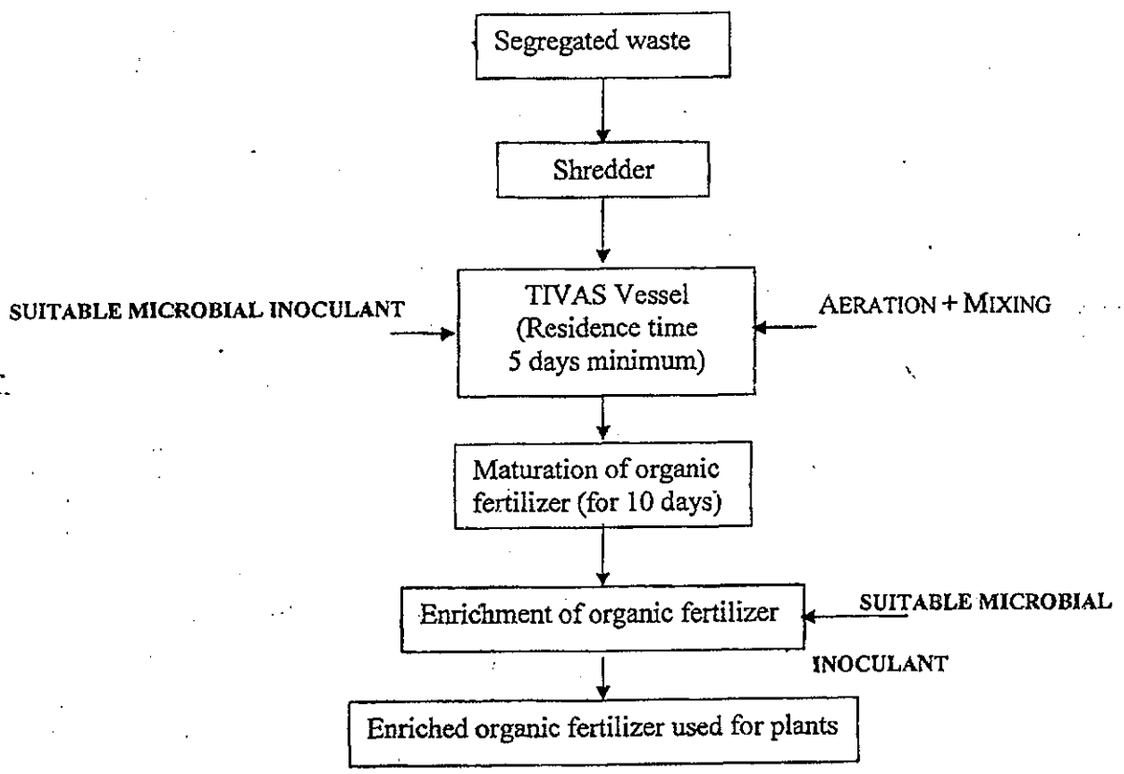
Benefits

The process provides complete system for treatment of Biodegradable Waste. It

1. Works round the year.
2. Provides a scientific method for the production of organic fertilizer.
3. Elimination of foul odour.

4. Elimination of Pathogens and weed seeds.
5. Problem of rodents and insect pests is avoided.
6. Aesthetically acceptable.
7. Treatment time is substantially reduced.
8. Eco-friendly and Economical
9. Load on the landfill is reduced.

Schematic flow diagram of Solid Waste Management based on 'TIVAS BIO-COM' process



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Annexure VII

Runoff Calculations

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ANNEXURE VII

RUNOFF CALCULATION

Type		AREA	AVG RAIN-FALL PER YEAR	AVG. RAIN VOL	RUN OFF COEFFICIENT	DAILY RUN OFF
Present		SQM	Meters	CUM	%	CUM
1		2	3	4	5	6
Covered Area Present		-	0.7	-	80%	-
Open Area Present		31,451	0.7	22016	30%	6605
Total Runoff present						6605
Future		SQM	Meters	CUM	%	CUM
Roof Area		7138.83	0.7	4997.2	90%	4497
Podium Garden	Soft Soil	6,900	0.7	4830	70%	3381
	Hard Area	6500	0.7	4550	80%	3640
	Water Body (Which will act as Water Storages)	1,500	0.7	1050	10%	105
Roads, Hard pavement		6800	0.7	4760	80%	3808
Open Areas		2,612	0.7	1829	40%	731
Total Runoff Future						16163

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Annexure VIII

Noise Levels
Construction Equipments

ANNEXURE VIII

NOISE LEVELS GENERATED FROM CONSTRUCTION EQUIPMENT[1]

Name of Source	Noise Level at 16 m (50 ft) from Source in dB (A)	Noise Level at 15 m from source (calculated) in dB (A)
Air Compressor	87	111
Back Hoe/Loader	81	105
Concrete Mixer Truck	85	109
Concrete Pumper	70	94
Concrete Vibrators	77	101
Cranes - mobile	81	105
Dump Truck	83	107
Hammering	86	110
Jackhammer	88	112
Pile Driver	100	124
Radial Arm Saw	80	104

Source: www.gvrd.bc.ca/education/pdf04/ColumbiaWorkshop1-ConstructionNoise.pdf

ENVIRONMENTAL IMPACT ASSESSMENT OF "XION" – MIXED USE DEVELOPMENT AT HINJEWADI, PUNE

FORM 1A

Submitted to

Ministry of Environment and Forests,
New Delhi

Submitted by

M/s PSC Pacifc
PSC House, CTS No.111+111/2 Anand Colony,
Dr. Ketkar Road,
Pune 411 004

July 2007

FORM-1 A

CHECK LIST OF ENVIRONMENTAL IMPACTS

(Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme)

1. LAND ENVIRONMENT

(Attach panoramic view of the project site and the vicinity)

1.1 Will the existing land use get significantly altered from the project that is not consistent with the surroundings? (Proposed land use must conform to the approved Master Plan / Development Plan of the area. Change of land use if any and the statutory approval from the competent authority be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) the site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.

- The existing land use will not get altered from the project. As per the new zoning structure by state department the area comes under residential and commercial zone.
  The Master plan showing the proposed site is given as **Annexure I.**
  Site location map is attached as **Annexure II.**
  Land use map of the site is attached as **Annexure III (A).**
  Contour Map of the Project Site is attached as **Annexure III (B)**

1.2. List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.

➢ Total Land Area	7.771 acres (31,451 Sq.m.)
➢ Built up Area for construction	22,800.75 Sq.m.
➢ Ground coverage Area	5700.19 Sq.m.
➢ Water Requirement	Total Fresh Water Demand will be 209 m^3/day
➢ Power requirement	2.5MVA (Maximum peak demand)
➢ Solid Waste generation	1.03 T/day

Connectivity — Pune is well linked by roads, railways and airways to the rest of the country. The site is situated in the suburb of Pune city at Hinjewadi. The site can be approached by Mumbai-Pune expressway. At present the site is

accessible from Rajiv Gandhi InfoTech Park. The site is well connected to Pune city and Pimpri-Chinchwad Industrial area by road. The Pune International airport is within aerial distance of approximately 21km towards east direction from the site. Nearest railway station is Pune Railway Station of Central Railway, which is about 15km from the site in south-east direction.

Parking Facilities- 4 wheeler: 504 nos
2 wheeler: 306 nos.

1.3. What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing landuse, and disturbance to the local ecology).

- The project being a well planned activity, will result in organized open spaces and green areas. The project will be so developed that almost 75% of the area is designated for landscaping and open spaces. The biodiversity in the area will increase due to the proposed green areas, which is planned to be greater than the required open greens.

1.4. Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc may be given).

- The main reasons for erosion are overexploitation of groundwater, instable slopes, landslides etc. The proposed construction will involve cutting and filling operations. The proposed site area is having natural slope from north to south and is not prone to erosions. The project would involve construction of roads and development of green areas, which would reduce the chances of erosion and subsidence.
- Subsidence is not anticipated, as ground water would not be used as source of water supply.
- As per the Seismic-zoning map of India, the project site falls under zone III. Structural design requirements will be as per Zone III.

1.5. Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site).

- The site is having almost flat. The proposed devolvement is planned in such a manner that it will not alter the existing drainage pattern of the area.

1.6. What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc.).

- Quantity of earthwork involved – 133702m^3.

Filler material to be transferred from outside is as follows:

1.	Earth	- 21418 cum
2.	Aggregate	- 8187 cum
3.	Coarse Sand	- 16915 cum
4.	Cement	- 4715 cum
	Total	**- 184937 cum**

1.7. Give details regarding water supply, waste handling etc during the construction period.

- Water from MIDC will be taken during the construction phase.
- Labour camps will be provided on the site. The waste generated from labour camps would be mainly household domestic waste that would be collected and composted on site using suitable composting technique. Temporary soak pits/ septic tank shall be constructed on the site for the wastewater generated from labour camps.

1.8. Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity).

- No wetlands and major low lying areas on the site

1.9. Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal).

- No health hazards are expected during the construction phase. The waste generated during construction phase can be broadly classified as construction waste and domestic waste. About 1800MT/day of construction waste and negligible quantity of domestic waste would be generated.

  A significant portion of the construction waste generated will be used on the site. Recycled aggregates will be used for filler application, and as a sub-base for carriageway, footpaths and pavements. A significant portion of wood scrap will be reused on the site. The remaining construction waste generated will be sent to an approved dumping site with the help of authorized agencies.

The domestic waste generated from labour camps will be treated on site by using suitable composting technique and septic tanks will be provided for the sewage generated.

2. WATER ENVIRONMENT

2.1. Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement.

- Total Fresh Water Demand required for Complete Project will be 209.0 m^3/day, which will mainly be met form MIDC water supply. Makeup water for cooling towers for air – conditioning, gardening, will be provided from treated sewage effluent. Water Treatment Plant (WTP) and Sewage Treatment Plant (STP) will be provided on site. Total wastewater to be treated in STP would be 306m^3/day out of which 294 m^3/day would be available for flushing and other purposes.

- The water budget calculations for the proposed project are given in **Annexure IV.**

- Application to MIDC is already in process. The treated effluent from the sewage treatment plant will be used for landscaping and A/C makeup water. Apart from this, rainwater harvesting will be carried out within the site.

2.2. What is the capacity (dependable flow or yield) of the proposed source of water?

- The total fresh water demand for the site is 209.0m^3/day, which will mainly be met form MIDC water supply.

MIDC Supply:

The supply from MIDC is envisaged while formulating the proposal. Since MIDC is acting as the developing authority at STPI-Hinjewadi, it is prudent to have direct water supply from the existing sources of MIDC. The treated water shall be available, if we opt for MIDC supply. The quantity and quality shall be assured.

2.3. What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality).

Total Fresh Water Demand required for Complete Project will be 209.0m^3/day, which will mainly be met form MIDC water supply.

2.4. How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage).

- Total wastewater to be treated in STP would be 306 m^3/day out of which 294m^3/day would be available fro flushing and other purposes. The recycled water can be used for
  - Toilet flushing
  - Cooling towers for air conditioning
  - Gardening
  - Premises Maintenance

2.5. Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption).

- No diversion is anticipated.

2.6. What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)

- The quantity of wastewater generated from the proposed project activity will be 306.0 m^3/day. The characteristics of waste water generated from the proposed activity are as follows

Parameters	Unit	Values
pH	--	7 - 8
BOD	m^3/day	250 - 300
COD	m^3/day	450 – 600
O & G/ ABS	m^3/day	10 – 20
TSS	m^3/day	100 – 200

The treated wastewater will be used for landscaping and A/C makeup purposes.

2.7. Give details of the water requirements met from water harvesting? Furnish details of the facilities created.

- Following are the details of rainwater harvesting proposed at the site.
- Area of plot : 7.771 Acres
  : 31,451Sq.m.
- Rainfall intensity assumed 700 mm per year.

  So, average rainfall Intensity
  : 31,451 X 0.7

: 22015 m^3/yr

: 22 Ml/yr

Considering around 26.5 % run off losses:-

Intensity of rainfall : 22 X 0.75

: 16.5 Ml/yr

But Daily Demand of Water is 209m^3/day

Therefore quantity of daily demand of water met by rainfall =

: 16.5 / 0.2

: 82 days

: i.e 2.7 months

Therefore daily water demand that can be met from rainwater harvesting will have a stock of 2.7 months.

2.8. What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?

- In post construction activities, the proposed Xion project will have minor impacts on hydrology and ground water quality of the area as the impact of soil runoff from the site leading to off site contamination is reduced as the special geology of the site allows percolation of water to a very large extent without contaminating ground water.
- For a campus of 7.388 acres it is necessary to prevent the surface runoff by means of storm water harvesting Constructing storm water diversion channels to divert storm runoff from flowing over the construction areas reduces the problems of water logging or flooding.

2.9. What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any).

- In the proposed development there will be no tapping of groundwater. Water demand for the construction as well as operational phase will be met from sources such as MIDC.

- Rainwater harvesting scheme will be practiced for groundwater recharge, which will have a positive impact on the groundwater table.

2.10. What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts).

➢ To prevent degradation and maintain the quality of the water source, adequate control measures have been proposed to check the surface run-off, as well as uncontrolled flow of water into any water body.

- Avoiding excavation during monsoon season.
- Rainwater harvesting can serve as a solution to the water problem in worst case scenario.

Following methods can increase efficiency of rainwater harvesting and recharging ground water: -

- Catch drainage all along the periphery of plot to prevent surface runoff.
- Reduce and filter surface runoff
- Use vegetated swales and depressions to reduce runoff

2.11. How is the storm water from within the site managed? (State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels).

➢ During rainy season, after the rainfall some part of the rainwater percolates into the ground and joins ground water table, a part is retained as soil moisture, some part is lost in evapotranspiration and the remaining part overflows as storm water run off. The quantity of run off reaching the sewers or drains is considerable as compared with sanitary sewage.

For a campus of 7.771 acres of Xion project it is necessary to prevent the surface runoff by means of storm water harvesting. Average intensity of rainfall in the area under consideration may be taken as 700 mm. The quantity of water available from storm if stored is, capable to fulfill water demand of campus for about two months' period.

Rain water from the terraces are led down to the ground level through vertical leaders of 110 mm/160 mm dia. PVC Pipes and then discharged into the external building peripheral storm water drain located at the ground level. RCC hume pipes of NP2 class are envisaged to be laid below roads for crossings. The Building peripheral drains are designed based on the run-off available from the roofs and the surroundings areas. The design of cross sections of drains is worked out as per the discharge formula Q = A x V, Manning's formula and rational formula to calculate run-off. (Refer Annexure V)

2.12. Will the deployment of construction laborers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation).

- No, the deployment of construction laborers will not lead to any unsanitary condition. The construction laborers will be provided with temporary shelter shades within the project premises. The unsanitary condition will be removed by means of providing readymade Septic tanks & Soak pits. The domestic waste generated from labour camps will be treated on site by using suitable composting technique

2.13. What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal).

Design Basis
The Sewage Treatment Plant (STP) is designed to treat the raw wastewater generated from commercial area having following characteristics:

Inlet Parameters

pH	6.5 – 8.5
BOD	250 mg/l
COD	550 mg/l
Suspended Solids	200 mg/l

Outlet Parameters
After biological treatment (for disposal)

pH	6.5 – 8.5
BOD	≤ 30 mg/l
COD	≤ 250 mg/l
Suspended Solids	≤ 100 mg/l

Process Brief

The raw sewage generated will be passed through the BAR SCREEN CHAMBER wherein the coarse, floating solids like leaves, rocks, branches, plastics and rags, etc. will be trapped and removed manually. The effluent will be then collected in the COLECTION TANK wherein the wastewater will be collected by gravity and pumped into downstream units. The tank is provided with coarse bubble, aeration to avoid settling of suspended solids and putrefaction of wastewater.

The effluent will be then pumped to STILLING CHAMBER through FEED PUMPS to reduce its velocity before entering further treatment operations. The effluent will be then passed through FINE SCREEN CHAMBER wherein fine particles like small paper, plastic materials of various types, razor blades, grit, feces etc. are removed.
The effluent after screening will be passed through GRIT CHAMBER wherein the materials having specific gravity or settling velocities greater than that of organic materials is passed. It is necessary to remove to avoid abrasion and abnormal wear and tear of the moving mechanical equipments.

The effluent will be then passed through PARSHALL FLUME where the velocity of effluent is maintained. PARSHALL FLUME itself acts as a measuring device of velocity and it also develops a hydraulic jump.
The effluent is then pumped into the AERATION TANK wherein the attached, aerobic microbes will utilize the pollutant in presence of oxygen thereby reducing BOD/COD.

The biomass generated in aeration tank will be separated in the CLARISETTLER TANK and clear supernatant will flow by gravity. The treated wastewater will be dosed with liquid Chlorine and allowed to react in CHLORINE CONTACT TANK. The treated wastewater will be pumped through Activated Carbon Filter. Part of treated water from ACTIVATED CARBON FILTER will be given UV TREATMENT prior to be used for AC makeup & toilet flushing and remaining treated water will be used for gardening, etc.

The dead biomass separated will be taken in the SLUDGE SUMP. From Sludge Sump the sludge is pumped to SLUDGE THICKENER unit wherein sludge is dewatered or greater amount of water is removed from sludge. The water extracted from the sludge is again recycled to the COLLECTION TANK which results in a larger recirculation of these fine solids. The thickened sludge will be further pumped to CENTRIFUGE through centrifuge pumps where Polyflock dosing is done which accelerate the function of further sludge thickening, which is then led to CENTRIFUGE SHED.
The process flow diagram of the proposed sewage treatment plant is given in **Annexure V.**

2.14. Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.

- The plumbing system is designed as a two-pipe system based on NBC and SP 35. Provision of separate stacks/pipes for waste appliances viz, pantry sinks, washbasin, shower outlets etc., and soil pipe for water closets is provided. Anti-syphonage pipes are envisaged for soil stacks for prevention of broken water seals in sanitary appliances and entry of foul smell in to the building. Vent pipes shall be terminated 600 mm below the terrace level. Sewerage network comprises of horizontal and vertical stacks laid in the toilets and in the shafts. The vertical stacks are terminated into a sewer main / manhole outside the building. Sewage is then led to the main sewer line network through network of RCC Hume pipes and stoneware pipes and manholes. The manholes are generally spaced at 30.0 m c/c and at every change in direction of the pipe routing. Drop manholes are proposed at certain locations where the change in slope is very steep. Grease traps have been envisaged for the disposal from kitchens

  Material Specification:

  PVC/ UPVC pipes and fittings confirming to IS 13592 & IS 4985 will be provided.

3. VEGETATION

3.1. Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with its unique features, if any).

- No. The local ecosystem is characterized by common afforested tree species such as Parthenium hysterophorus Linn, Cassia uniflora Mill, Xanthium strumarium linn. etc.

  Details observed during field survey (conducted within 10 km radius of the project site), which is listed in **Annexure VI**

3.2. Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project).

- No. There is very scanty vegetation of grasses and shrubs along with very common fauna prevalent elsewhere in the area. The estimated habitat loss due to the project is shown in the following Table.

ESTIMATED HABITAT LOSS CAUSED BY THE PROPOSED DEVELOPMENT

Habitat	Estimated loss
Forest	Nil
Plantation	Nil
Grassland	Non significant
Agriculture	Nil

As a part of development 7410Sq.m. area will be devoted for dense landscape, 2475Sq.m. for hardscape and 2293Sq.m. for lawns and planters.

3.3. What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc along with a layout plan to an appropriate scale).

- The suggested plant species for green belt development are given in **Annexure VII**

4. FAUNA

4.1. Is there likely to be any displacement of fauna - both terrestrial and aquatic or creation of barriers for their movement? Provide the details.

- No. The proposed site and its surroundings do not support any habitat for any group of wild animals. Mula River flows towards south east at an approximate distance of 1.3km but does not support any significant fauna or flora.

4.2. Any direct or indirect impacts on the avifauna of the area? Provide details.

- A few mammalian species like Mongoose, Rabbit etc were recorded from the riverside vegetation. The reptiles include Rattlesnake, lizards etc. The birds recorded in the area include common Crow, Sunbird, Parrot, Sparrow, Pond heron, Kingfisher etc are also observed near the riverside. The main fish catch from the river are Catla, Roha and Prawns etc. No impacts are expected.

4.3. Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna.

- Since the proposed project would not have any adverse impact on fauna hence mitigation measure not relevant.

5. AIR ENVIRONMENT

5.1. Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions).

- The project will result in a negligible increase in the atmospheric concentrations of gases due to D.G sets operation (back up power only) and the increased traffic. The proposed activity will not result in the formation of any heat islands, as it does not involve any significant change in the landuse pattern or the concreting of areas. Another source will be from boiler emissions with fuel consumption of 500 l/ day of LDO.

- CO, NOx and SPM are the primary pollutants anticipated as tailpipe emissions from light vehicles traveling along on-site paved roads. Tailpipe emissions of vehicles traveling on-site are conservatively estimated as a worst-case scenario.

- The atmospheric pollutant concentration prediction for CO due to on-site traffic generation as a result of the proposed project is assessed with the help of air quality model CALINE 4. Concentrations have been predicted for baseline traffic scenario as well as for the projected traffic in the year 2010 when the project will be fully operational. The roads link geometry and the receptor locations considered for traffic modeling are shown in **Figure 1.**

- Concentrations have been predicted at 20 receptors near the project site. The CO concentration values at all the 20 receptors were found to be between 1.1 -1.4 ppm considering the baseline traffic scenario. Concentrations have been predicted at these receptors considering projected traffic and traffic added due to the proposed projects. Receptor-2, 10 & 17 showed highest concentration of CO with 1.4 ppm. Thus, the increase in traffic due to the proposed project shows marginal increase in CO concentration over the baseline scenario.

- Thus, from the modeling results it is clear that impact due to vehicular traffic in not significant. Although the incremental increase is not much high, mitigation measures primarily to minimize the use of private vehicles. It is therefore assumed that if these measures are implemented, the concentrations of pollutants as presented above will be lower in value, posing less of an impact on-site and at receptor locations.

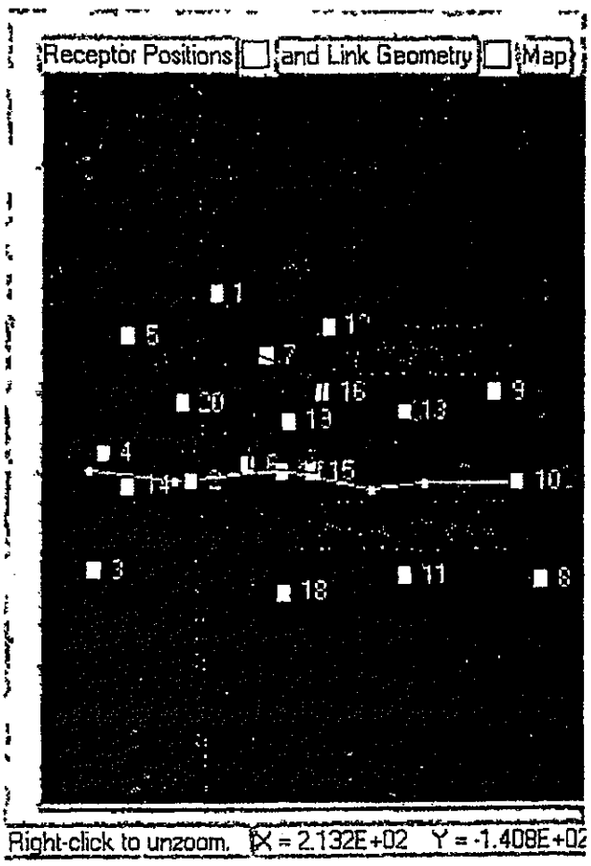


Figure 1: Road Link Geometry and Receptor Locations

5.2. What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.

- Diesel generator sets operated for back-up power supply are identified as the only major sources of gaseous and particulate emission. Impact of vehicular activity is not significant. SO_2, SPM, NO_x and CO emissions are expected due to fuel combustion in generators sets. To serve as a back-up power supply, 7 DG sets have been proposed with capacities varying from 160 kVA to 1500 kVA. As a worst-case scenario, impact of generations of gases are predicted using ISCST3 air quality model assuming an operation time of 24 hours, in relation to on-site observed meteorological parameters given in **Annexure VIII.**

- The maximum predicted concentrations for SPM, NO_x, SO_2, CO due to DG sets are found 1.25µg/m^3, 5.70µg/m^3, 4.75µg/m^3 and 4.51µg/m^3 respectively. The details of predicted value with back ground air quality levels along with NAAQS are provided in **Table VIII-1 to Table VIII-4.** The spatial distribution of predicted pollutants concentrations are also shown in **Figure VIII-2 to Figure**

VIII-5 in Annexure VIII. As the DG sets will be operated for back-up power supply only, hence the impact of generation of gaseous pollutants in the ambient environment will be negligible.

5.3. Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.

- The proposed project will provide ample parking to its residents and visitors. A total car parking for 504 nos for 4 wheelers and 306 nos for 2 wheelers will be provided. There will provision for basement parking along with surface parking. The basement will have 256 car parking and 176 nos. of 2 wheeler parking.

  Adequate measures have been proposed to manage the traffic within and outside the site. A main entry point will be provided. The vehicular traffic movement within the complex will be such that it will not disturb the landscaped areas and organized open spaces. An additional entry and exit will be provided to cater to the commercial unit in the area and to ensure that no hindrance is caused to the site traffic. Roads of sufficient width will be provided and ramps will be provided appropriately to access the basement parking.

5.4. Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc, with areas under each category.

- Internal roads, footpaths/pedestrian pathways have been planned within the proposed complex. The layout plan showing the area details is given in **Annexure IX.**

5.5. Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.

- The site falls in outskirts of Pune City and is located near Hinjewadi, which is designated for IT development. By considering the addition of vehicles due to the proposed project with the existing roads and vehicles plying on them, there will result in a marginal increase in the noise levels and will not cause any impact.

5.6. What will be the impact of D.G sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.

- Sources of noise emissions are expected from various construction equipments. General noise levels generated from the operation of equipment and machinery without control at a distance 1 m from the source are provided in **Annexure XI.**

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The impact of noise in the ambient environment is assessed for two phases separately i.e. construction phase and operation phase using NOISE model (DHAWANI) applicable for stationary source. The noise impact around the project site during construction phase and operation phase are shown in **Figure XI-1** and **Figure XI-2** in **Annexure XI** respectively. The impact of noise due to equipment used during the construction activity will be for short-term whereas the noise impact due to DG sets operated during operation phase for long-term. As the D.G sets will be located in an acoustic enclosure so that the noise generated meets the ambient standard as per CPCB norms.

6. AESTHETICS

6.1. Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?

- Earlier the site was under agricultural use. Agricultural activities at the site were reduced since past few years. The proposed land use of the site would be commercial and will not result in obstruction of view, scenic amenity or landscape. However, the buildings will be planned in such a way that the organized open areas and landscaped areas are at the center so that all the residents can enjoy the green areas.

6.2. Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?

- No. At present there are no structures on the plot.

6.3. Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.

- The project has been designed as per the Dept. of Town Planning, Govt. of Maharashtra.

6.4. Are there any anthropological or archaeological sites or artifacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.

- No anthropological or archaeological sites or artifacts are found near the site area.
- A famous archeological structure of Shaniwar Wada lies at an aerial distance of 15 km and Pune University at about 6 km.

7. SOCIO-ECONOMIC ASPECTS

7.1. Will the proposal result in any changes to the demographic structure of local population? Provide the details.

- During construction phase, approximately 400 workers would be employed. Majority of the labour is to be recruited locally and only minimal skilled workers would be from outside, which is anticipated to be very small and will not alter the existing demographic profile of the area.

7.2. Give details of the existing social infrastructure around the proposed project.

- Hinjewadi village-in the west at about 0.8km, Wakad village boundry- towards north and Tathavade village-in the north at about 3km
- The study area has a population of 36,83,397 of which approximately 8.41% is SC and ST. 75% of this population is literate. Sex ratio was recorded as 900 males/ 1000 females. In the study area basic amenities are easily available.

7.3. Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?

- No. The project is likely to generate job opportunities and will have a positive impact on the local communities.

8. BUILDING MATERIALS

8.1. May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency).

- For the purpose of paving, sun dried pavers will be used instead of baked pavers as they are manufactured from energy efficient processes.

8.2. Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?

- Adequate mitigative measures will be adopted. Construction equipments with idling control technologies will be used. Regular maintenance of the equipments will be carried out. The construction activities will be carried out during the

daytime only. The workers exposed to high noise generating equipments would be provided with earplugs and earmuffs.

8.3. Are recycled materials used in roads and structures? State the extent of savings achieved?

- The proposed project being a new construction activity, will not envisage the use of recycled materials within the site. The recycled materials will be bought from outside sources and will be used as fillers in base and sub-base of the carriageway, footpaths/pavements or pedestrian ways.

8.4. Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.

- The collection and transportation of the solid waste generated during the operational phase of the project will be as follows:

  - During the collection stage, the bio-degradable and non recyclable/non biodegradable waste will be stored and collected separately. Only the non-recyclable and non-biodegradable waste will be transported to the waste disposal site. The segregation, transportation and disposal of wastes will be done by the authorized agency. Biodegradable waste will be treated at site using 'In Vessel Composting PROCESS' details of which are given in **Annexure XII.**

  - To minimize littering and odours, waste will be stored in well-designed containers/bins that will be located at strategic locations to minimize disturbance in traffic flow.

  - Care will be taken so that the collection vehicles are well maintained and minimize noise and emissions. During transporting of the waste, it will be covered to avoid littering.

  - With regards to the disposal/treatment of waste, the management will use the services of the authorized agency for waste management and disposal of the wastes from the proposed complex during its operational phase.

9. ENERGY CONSERVATION

9.1. Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?

- Power would be drawn from Maharashtra State Electricity Distribution Co. Ltd. (MSED)
- The total power requirement will be approximately 2.5 MVA.
  Backup Source - D.G sets using HSD fuel will be used
  Energy consumption – 0.089kVA/ Sq.m of built-up area

Effective measures have been incorporated to minimize the energy consumption in the following manner:

- Maximize the use of natural lighting through architectural design
- The building will be designed in such a way that the public areas can be cooled by natural ventilation.
- Promoting use of solar water heating
- Purchase of energy efficient appliances
- Constant monitoring of energy consumption and defining targets for energy conservation
- Sunscreen films on windows to reduce heating inside the buildings

9.2. What type of, and capacity of, power back-up to you plan to provide?

- Back-up power units will be provided by D.G sets of varying capacities. The D.G sets will be operated only during an emergency situation such as interruption of regular power supply by MSED.
- The details of proposed DG sets are as follows;

Sr. No.	Capacity	Nos.	Minimum Stack Height
1.	1500kVA	1	30.0
2.	1000 kVA	4	30.0
3.	500kVA	1	4.5
4.	160kVA	1	2.6

9.3. What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?

- Glass will be used only for the windowpanes and shall be chosen such that the SHGC (Solar Heat Gain Co-efficient) is 0.25 or less typically suitable for the area.

- Maximum service areas will be provided on the western side.
- Lesser openings will be provided on the West side.
- Maximum openings will be provided on the South side.
- Green areas and open areas will be so spaced that a reduction in temperature is achieved.

9.7. Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.

➢ Yes. The rooms will be so dimensioned that effective air conditioning can be carried out. Public areas will be cooled by natural ventilation. The design of the buildings will be such that maximum use of natural lighting can be achieved. The walls, roofs and openings will be so designed that influx of heat is minimum.

1 transformers of 1.2 MVA, 1 transformers of 750 KVA, 1transformers of 400 KVA, 1 transformers of 125 KVA.

9.8. What are the likely effects of the building activity in altering the micro-climates? Provide a self assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?

➢ Heat emission from the proposed construction can be from the following sources: Heat absorbed from the paved and concrete structures, heat generated from equipments / appliances, and due to increased population in the proposed development. However the heat generated will not be significant and will be dissipated in the lush greens and open areas provided within. Hence it can be concluded that the heat island effect shall not be a concern for the concerned project.

9.9. What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.

➢ The Roof is planned with puffing / brick bat coba for water proofing and thermal insulation. Roof tops also have partly landscaped area / gardens.
➢ External wall – External opening will have regular door windows with slightly tinted glass. Regular walls will have some cladding / fixture paints.

Details of the U-Values and R-Values for individual components are given in **Annexure X.**

9.10. What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.

- The fire fighting system shall comprise of hydrant system and portable extinguishers. Smoke detectors will be provided along with manual call points. External yard hydrants shall be installed around all buildings in the Complex in galvanized steel fire hose cabinet (weather proof). All external yard hydrants shall be at one meter height from finished ground level as per National Building Code. External fire hydrants shall be located such that no portion of any building is more than 45 m from a hydrant, and the external hydrants are not vulnerable to mechanical or vehicular damage.

  All floors in each building system within the complex shall be provided with one separate fire hydrant risers, as per NBC, each riser connected to the fire hydrant landing valve on every floor, along with a fire hose cabinet consisting of first aid box, swinging hose reels, fireman axe, 63 mm dia canvas hose and nozzles. Fire escape staircases shall be provided and the building will be planned according to the NBC requirements.

9.11. If you are using glass as wall material, provide details and specifications including emissivity and thermal characteristics.

- The details of the emissivity and thermal characteristics of glass are given in **Annexure X.**

9.12. What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.

- The following measures will be adopted to mitigate the effects of infiltration:
  - Aluminium windows with rubber gaskets, so that the windows are sealed, will be provided.
  - Summer cross section ventilation will be maximum.

9.13. To what extent the non-conventional energy technologies are utilised in the overall energy consumption? Provide details of the renewable energy technologies used.

- Street lighting will be done through photovoltaic devices with daylight sensors.

10. Environment Management Plan

- The Environment Management Plan would consist of all mitigation measures for each item wise activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the site including fire. The detailed EMP for the proposed complex is enclosed as **Annexure XIII**.

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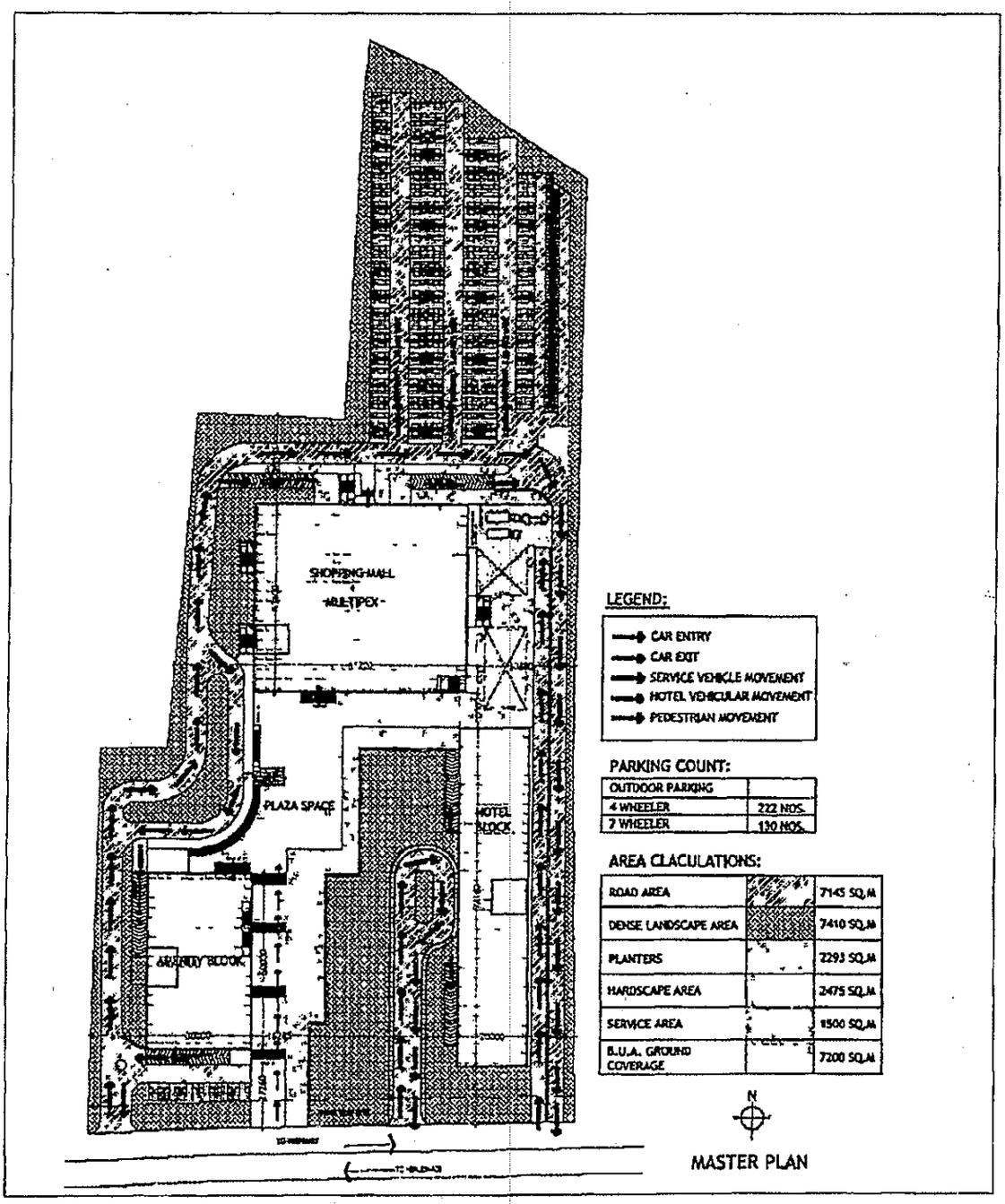
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Annexure I

Master Plan

ANNEXURE I

MASTER PLAN



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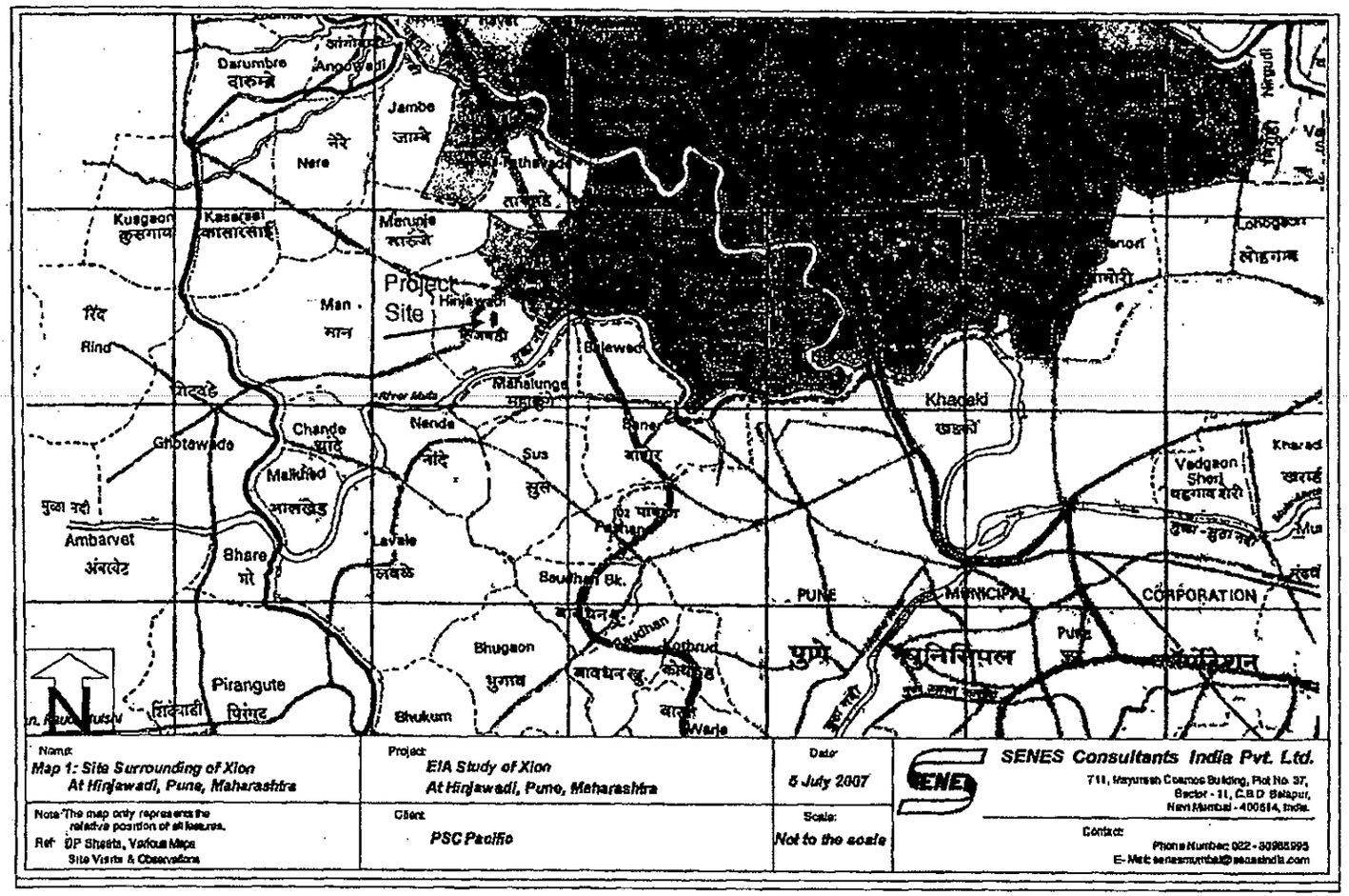
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Annexure II

Site Location Map

ANNEXURE II

SITE LOCATION MAP



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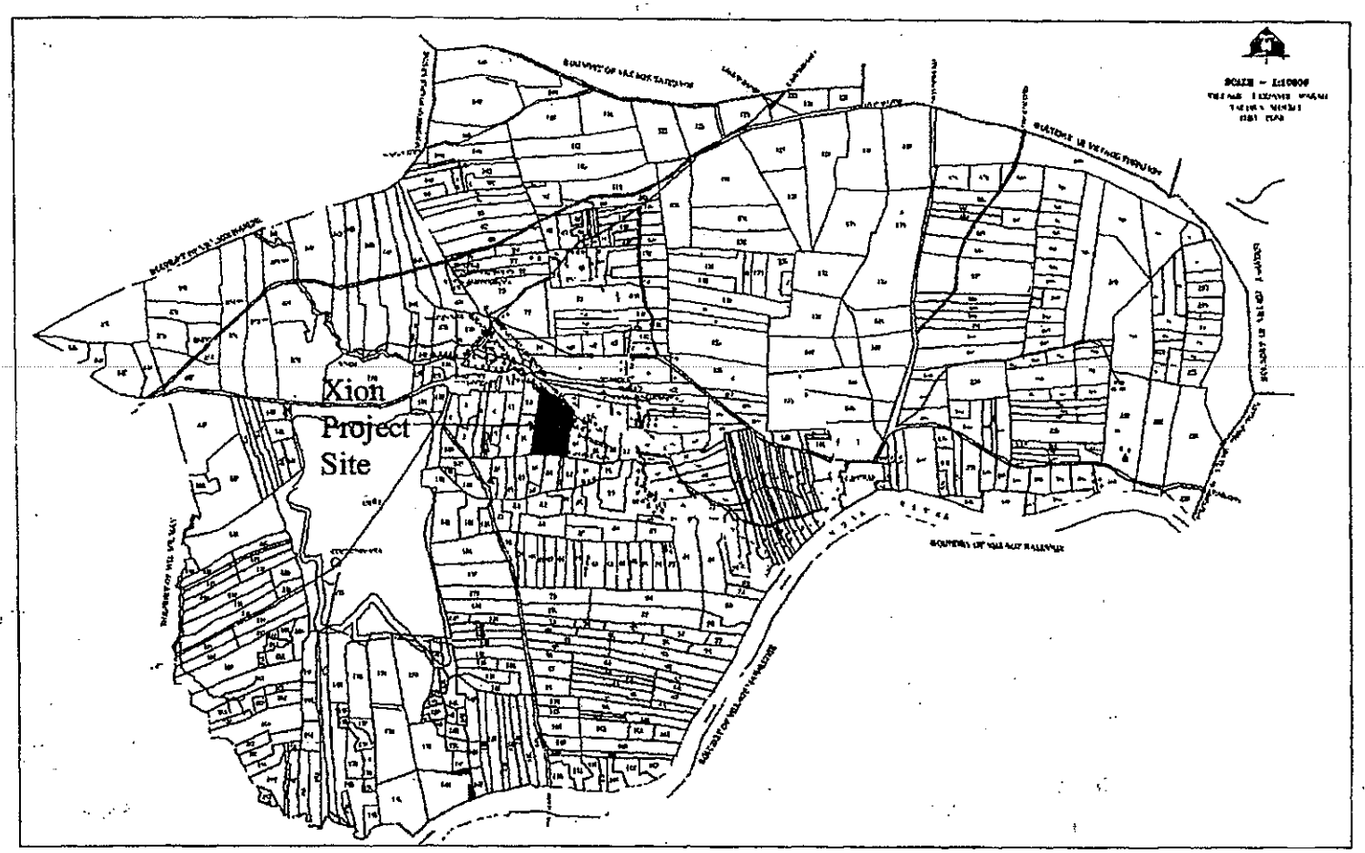
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Annexure III

Land use Map & Contour Map

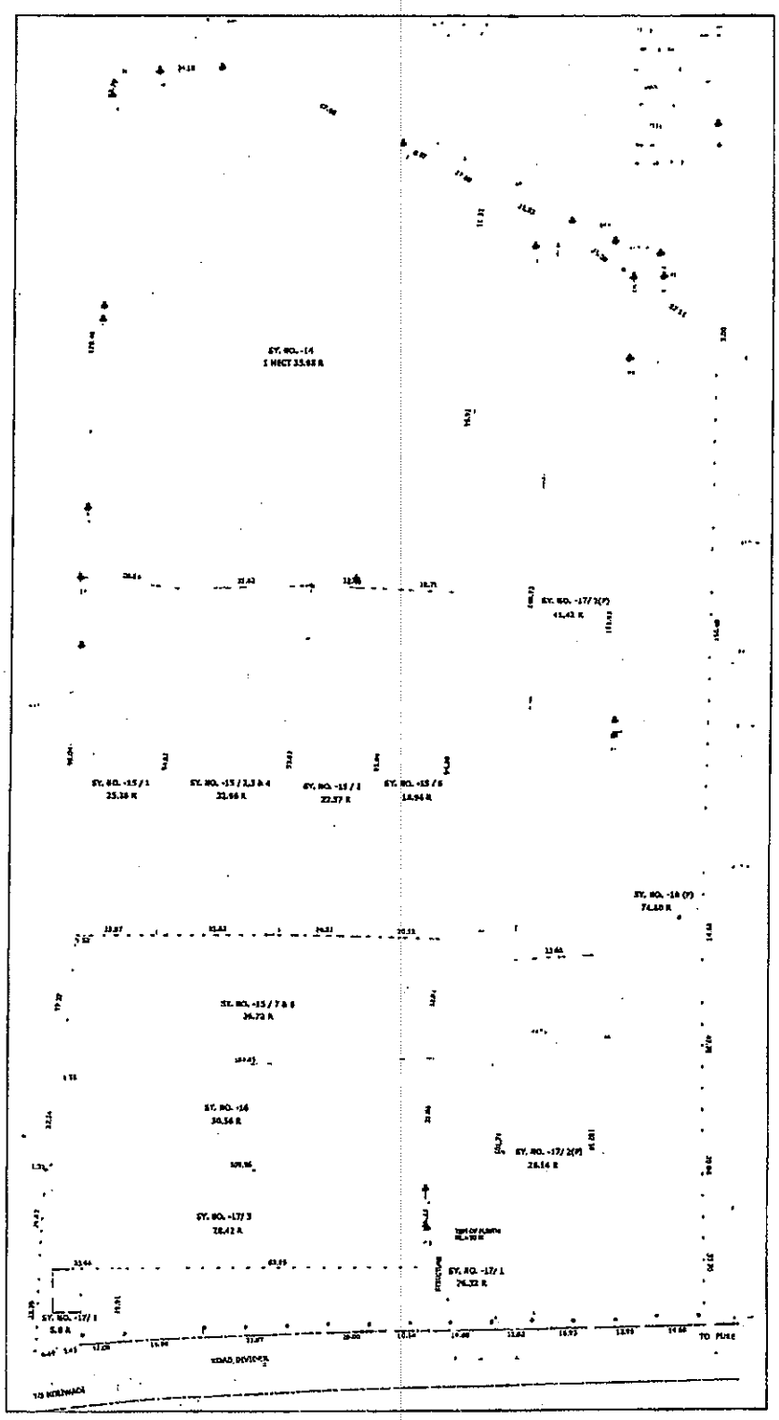
ANNEXURE III (A)

LAND USE MAP



ANNEXURE III (B)

CONTOUR MAP OF THE PROJECT SITE



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Annexure IV

Water Budget

ANNEXURE IV
WATER BUDGET CALCULATIONS FOR XION

Table 1 : Daily Demand Statement -

Sr. No	Category	Population	Rate of WS	Rate of Fresh Water Demand	Rate of Flushing Demand	Daily Demand	Daily Fresh Water Demand	Daily Flushing Water Demand
			lpcd			lits		
	1	2	3	4	5	6	7	8
1	Anchor Shop	600	45	25	20	27,000	15,000	12,000
2	Hotel	1,200	180	90	90	216,000	108,000	108,000
3	Mall	700	45	25	20	31,500	17,500	14,000
4	Multiplex	800	45	25	20	36,000	20,000	16,000
5	Amenity	50	15	8	7	750	400	350
6	Floating	100	15	8	7	1,500	800	700
	Total	3,450				312,750	161,700	151,050
	SoftScapescape- Sq. m	6,900	6		6			41,400
	Water Bodies	1,500	20		20			30,000
	Car wash-6844 cars @ 20lit	100	20		20			2,000
	Total Daily Demand					312,750	161,700	224,450

1	Daily Water Demand for PSC Pacific-Xion, Wakad as seen in Table - 1		312,750	Lits
4	Daily Fresh water Demand for PSC Pacific-Xion,Wakad as seen in Table-1		161,700	Ltrs
7	Consider 15 % extra fresh water demand as Unaccounted for Water of Total Fresh water Demand (2,957,128 Ltrs)		46,913	Ltrs
8	Total Fresh water demand for PSC Pacific-Xion,Wakad (Add 6 and 7)		208,613	Ltrs

	Daily Fresh Water demand for PSC Pacific-Xion, Wakad	208,613	Ltrs

0.2	MLD	
209	CuMtr/day	

Table -3 STP capacity For PSC Pacific-Xion, Wakad				
1	Total Waste generated @85% of the Total Daily Water Demand (3,618,275 Ltrs and 443, 569 Ltrs as seen from Table 3)		305,713	Ltrs
2	Treated water from STP @ 95% of the Total Waste water generated		290,427	Ltrs

Proposed STP capacity to treat total waste water generated	305,713	Ltrs
	0.31	MLD
	306	CuMtr/day

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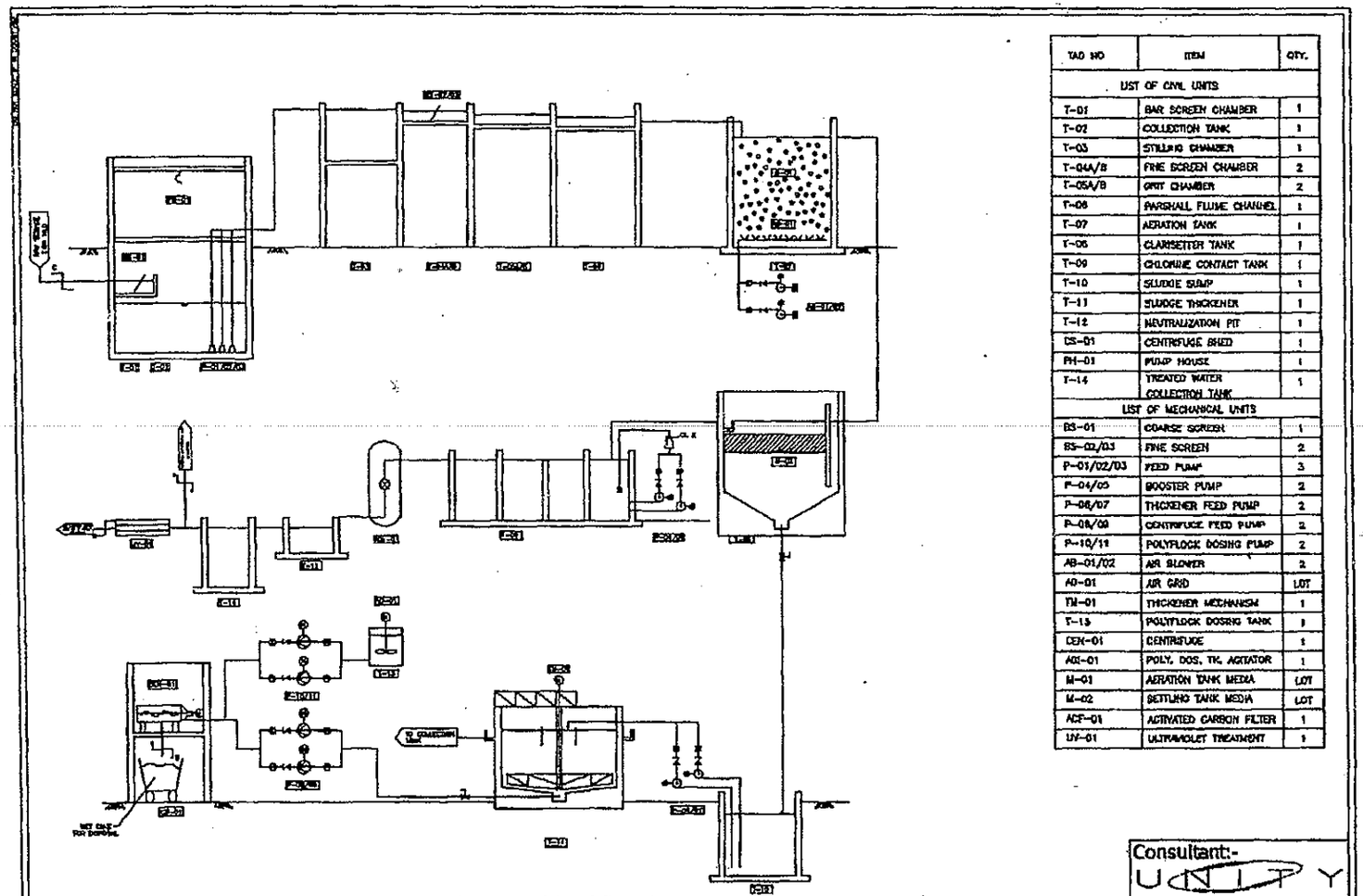
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Annexure V

Schematic Process Flow Diagram of STP

ANNEXURE V

SCHEMATIC PROCESS FLOW DIAGRAM OF PROPOSED STP



TAG NO	ITEM	QTY.
LIST OF CIVIL UNITS		
T-01	BAR SCREEN CHAMBER	1
T-02	COLLECTION TANK	1
T-03	STILLING CHAMBER	1
T-04A/B	FINE SCREEN CHAMBER	2
T-05A/B	GRIT CHAMBER	2
T-06	PARSHALL FLUME CHANNEL	1
T-07	AERATION TANK	1
T-08	CLARISETTER TANK	1
T-09	CHLORINE CONTACT TANK	1
T-10	SLUDGE SUMP	1
T-11	SLUDGE THICKENER	1
T-12	NEUTRALIZATION PIT	1
CS-01	CENTRIFUGE SHED	1
PH-01	PUMP HOUSE	1
T-14	TREATED WATER COLLECTION TANK	1
LIST OF MECHANICAL UNITS		
BS-01	COARSE SCREEN	1
BS-02/03	FINE SCREEN	2
P-01/02/03	FEED PUMP	3
P-04/05	BOOSTER PUMP	2
P-06/07	THICKENER FEED PUMP	2
P-08/09	CENTRIFUGE FEED PUMP	2
P-10/11	POLYFLOCK DOSING PUMP	2
AB-01/02	AIR BLOWER	2
AD-01	AIR GRID	LOT
TH-01	THICKENER MECHANISM	1
T-13	POLYFLOCK DOSING TANK	1
CEN-01	CENTRIFUGE	1
AGI-01	POLY. DOS. TK. AGITATOR	1
M-01	AERATION TANK MEDIA	LOT
M-02	SETTLING TANK MEDIA	LOT
ACF-01	ACTIVATED CARBON FILTER	1
UV-01	ULTRAVIOLET TREATMENT	1

PROCESS FLOW DIAGRAM

Consultant:-
UNITY
CONSULTANTS PVT. LTD
PHONE/FAX 020 25468878

Annexure VI

Plant Species Recorded From the Study Area

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ANNEXURE VI

NAME OF THE TREES RECORDED FROM STUDY AREA

Sr. No.	Name of the tree	Family	Common name
1	Acacia catechu (L.f.)Willd	Mimosaceae	Khair
2	Annona squamosa Linn	Annonaceae	Sitaphal
3	Azadirachta indica Juss.	Meliaceae	Neem
4	Cocos nucifera Linn.	Palmae	Coconut
5	Dendrocalamus strictus (Roxb.) Nees	Graminae	Bamboo
6	Eucalyptus globules Labill.	Myrtaceae	-
7	Holoptelia integrifolia Roxb.	Almaceae	Wavli
8	Mangifera indica Linn.	Anacardiaceae	Mango
9	Moringa pterosperma gaertn.	Moringaceae	
10	Peltophorum pterospermum Linn.	Caesalpinaceae	Copper Pod
11	Pihecellobium dulce (Roxb.) Benth.	Mimosaceae	Rain Tree
12	Sizygium cumini (Linn.) Skeels	Myrtaceae	Jambhal
13	Thespesia populnea Linn.	Malvaceae	Bendi Tree
14	Zizyphus jujuba Linn.	Rhamnaceae	Bhor

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Annexure VII

Suggested Plant Species for Green Belt Development

ANNEXURE VII

SUGGESTED PLANT SPECIES FOR GREEN BELT DEVELOPMENT

Botanical name	Common name	Notes
Aegle marmelos	bel	
Phyllanthus emblica	amla	
Dendrocalamus strictus	bamboo	
Butea monosperma	palash	not on hills,medium
Pongamia glabra	karanj	large
Cassia fistula	bahawa	
Terminalia ballerica	behada	
Szygium cumini	jamun	
Careya arborea	kumbha	
Schleichera trijuga	kusum	native,accent
Morinda pubescens	bartondi	native,scented,dry,small
Madhuca longifolia	mahua	large
Thespesia populnea	bhendi	small
Sterculia urens	karu	large
Holoptelia integrifolia	monkey biscuit	large evergreen

Botanical name	Common name	Notes
Albizzia lebek	shirish	
Bauhinia purpurea		
Cassia grandis		quick growing, salmon pink
Cassia javanica		rose pink
Cassia nodosa		rose pink
Colvillea racemosa		
Delonix regia	gulmohar	
Erythrina indica	pangara	
Erythrina indica alba		
Erythrina indica var parcellii	variegated pangara	
Lagerstroemia flos reginae	pride of India	
Mimusops elengi	bakul	
Parkia biglandulasa	tannu	
Peltophorum ferrugineum	copper pod	
Artocarpus incisa	bread fruit	
Putranjiva roxbughii		
Schleichera trijuga	kusum	slow
Amoora rohituka	rakta rohada	
Azadirachta indica	neem	

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Xion Trees - Trending		
Botanical Name	Common Name	Note
Ficus krishnae		small
Khaya senegalensis	senegal mahogany	
Pithocolobium saman	rain tree	
Sweitenia mahogany	mahogany	slow

Xion Trees - Tall		
Botanical Name	Common Name	Notes
Citharexylum quadrangularae	fiddle wood	
Anthocephalus cadamba	kadamba	shade
Tabubuea pentaphylla	pink tabubuea	shade
Brassia actinophylla	umbrella	small
Chorisea speciosa		
Couroupita guianensis	shivlinga	
Jacaranda mimosifolia	nilmohar	
Podocarpus chinensis		small
Polyalthia longifolia serpentina	mini ashok	small
Mitchellia champaca	sochafa	
Alstonia scholaris	satveen	shade
Khaya senegelensis	senegal mahogany	shade
Terminalia catapa	badam	
Terminalia arjuna	arjun	shade
Begnonia megapotamica		

Xion Trees - Small		
Botanical Name	Common Name	Note
Amherstia nobilis		
Bauhinia variegata	kanchan	
Bauhinia monandra		
Bauhinia blakeana	Hongkong Orchid	
Brownea grandiceps		
Callistemon lanceolatus	Bottle brush	
	Golden bottle brush	
Cordia sebestena		
Erythrina crista galli		
Guaiacum officinals	lignum vitae	
Lagerstromia thorelli		
Milletia ovalifolia		
Magnolia grandiflora	Him Champa	scented
Melia azederach	persian lilac	
Mesua ferrea	Nagchampa	
Plumeria alba	champa	
Plumeria acutifolia		scented

Botanical Name	Common Name	Notes
Parkinsinia aculeata	jerusalem thorn	
Saraca indica	seeta ashok	
Tabubuea spectabilis		
Nyctanthus arbortritis	parijatak	scented

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Annexure VIII

Air Quality Modelling

ANNEXURE VIII

AIR QUALITY MODELING

FIGURE VIII-1: WIND ROSE FOR METEOROLOGICAL MONITORING DATA

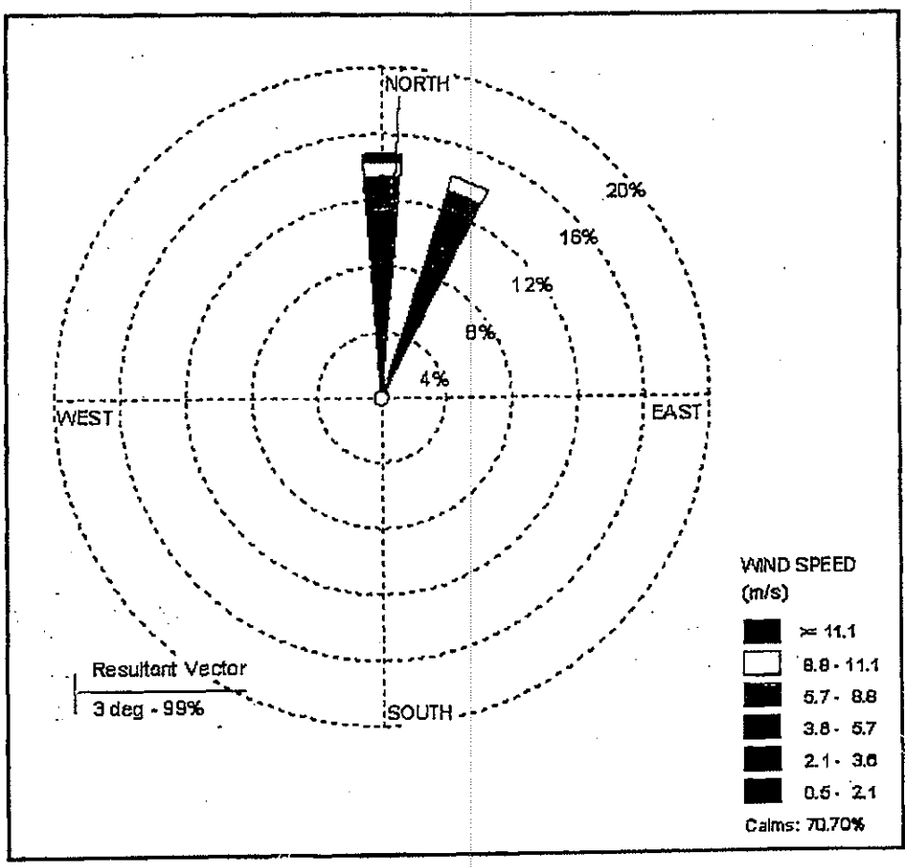


TABLE VIII-1 – SPM LEVELS AT DIFFERENT LOCATIONS (24 HOURLY MAXIMUM GLC IN $\mu G/M^3$) – DG SET

Concentration ($\mu g/m^3$)	Maximum 24 Hour GLC	AQ1	AQ2	AQ3	AQ4	AQ5
SPM Contribution from Site	1.25	0.15	0.05	0.2	0.5	0.1
SPM Baseline (Maximum)	n/a	125.1	109.9	47.8	49.0	79.3
Total SPM	n/a	125.25	109.95	48.0	49.5	79.4
NAAQS	200 $\mu g/m^3$					

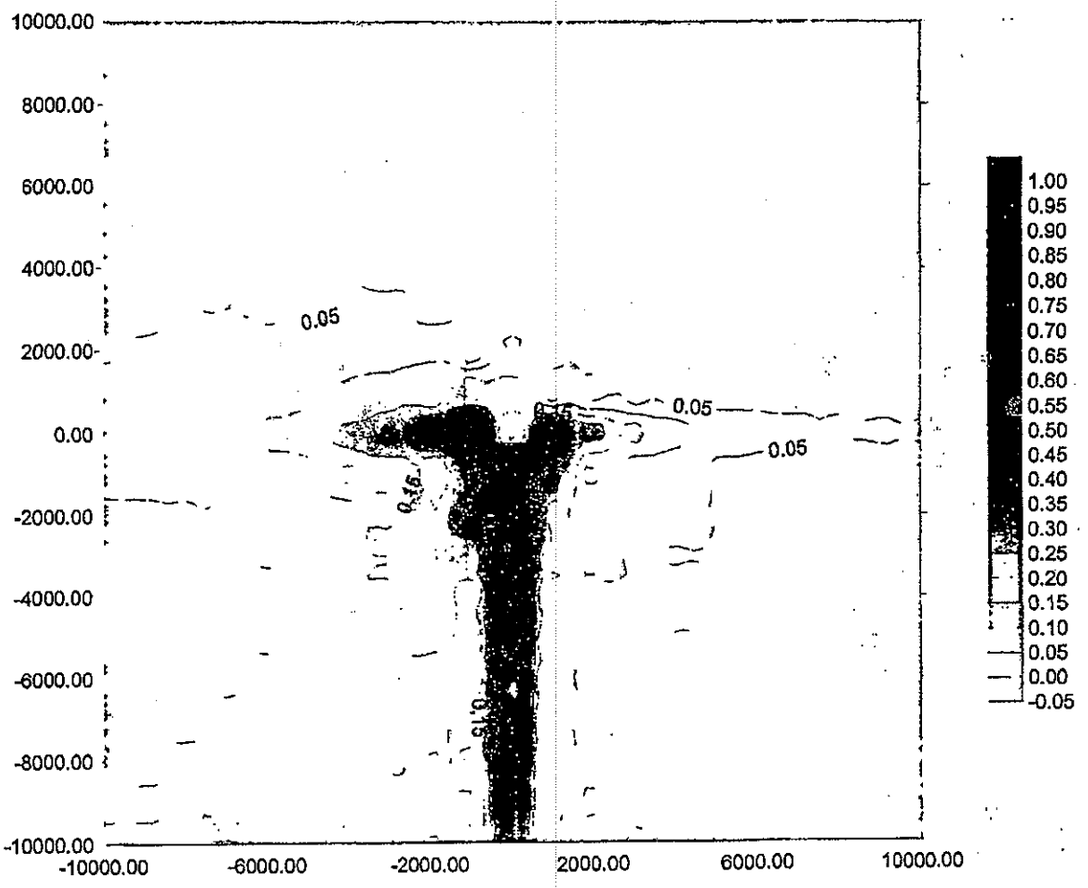


FIGURE VIII-2 – PREDICTED MAXIMUM 24 HOUR GLC ($\mu G/M^3$) OF SPM WITH NO CONTROL – DG SET

The SPM concentrations at the discrete receptors are well below the NAAQS causing minimal increase to background SPM levels. Maximum concentration occurs at (0.00, -1000.0). The anticipated operational duration is scheduled for 2 hours per day, therefore, in most cases the 24-hour average concentration will be 12 times lower than that presented above.

TABLE VIII-2– SO_2 LEVELS AT DIFFERENT LOCATIONS (24 HOURLY MAXIMUM GLC IN $\mu G/M^3$) WITH NO CONTROL – DG SET

Concentration ($\mu g/m^3$)	Maximum 24 Hour GLC	AQ1	AQ2	AQ3	AQ4	AQ5
SO_2 Contribution from Site	4.75	0.6	0.2	0.6	2.0	0.4
SO_2 Baseline (Maximum)	n/a	19.6	19.1	13.2	19.2	18.6
Total SO_2	n/a	20.2	19.3	13.8	21.2	19.0
NAAQS	80 $\mu g/m^3$					

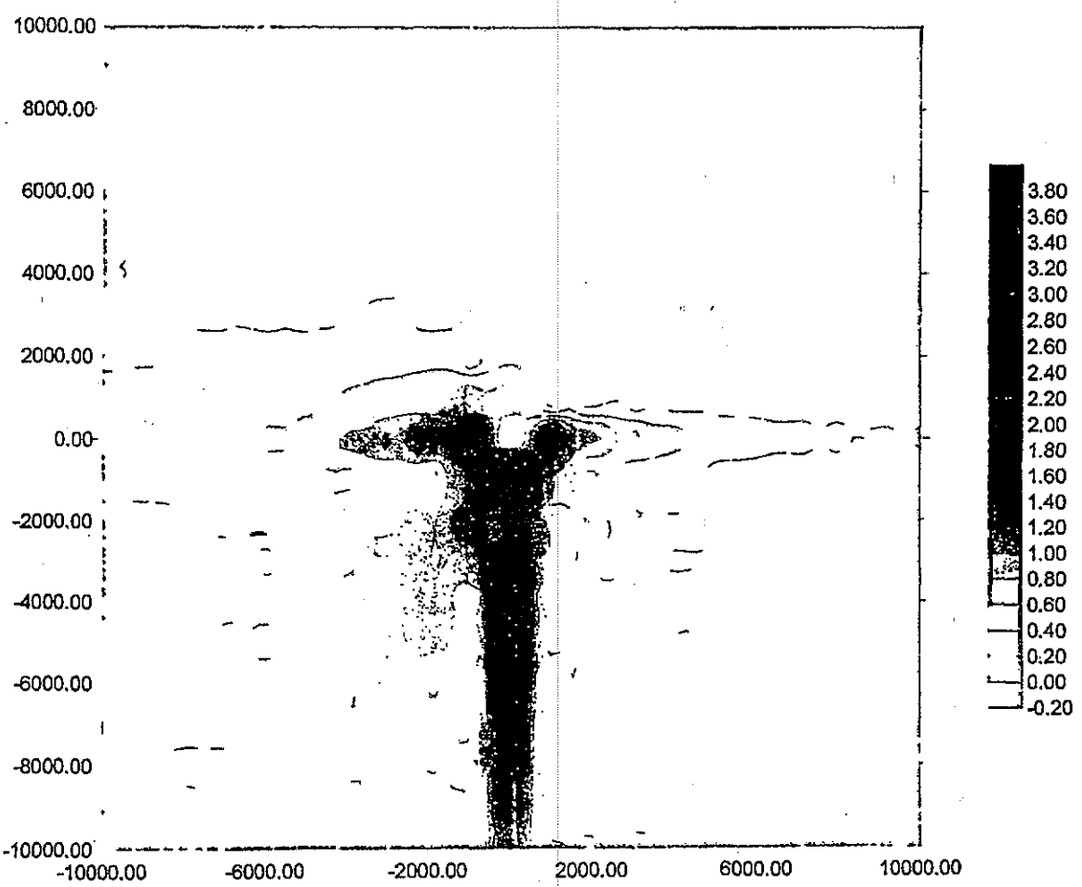


FIGURE VIII-3 – PREDICTED MAXIMUM 24 HOUR GLC ($\mu G/M^3$) OF SO_2 WITH NO CONTROL – DG SET

The SO_2 concentrations caused by diesel generator sets without control cause marginal increase towards total concentrations of SO_2, but remain below the standard, due to the use of ultra-low content of Sulphur in the fuel. Maximum concentration occurs at (0.00,-1000.0).

TABLE VIII-3 - NO_X LEVELS AT DIFFERENT LOCATIONS (24 HOURLY MAXIMUM GLC IN $\mu G/M^3$) WITH NO CONTROL – DG SET

Concentration ($\mu g/m^3$)	Maximum 24 Hour GLC	AQ1	AQ2	AQ3	AQ4	AQ5
NOx Contribution from Site	5.70	1.0	0.5	0.5	2.0	0.5
NOxBaseline (Maximum)	n/a	34.7	29.6	25.7	24.9	34.8
Total NOx	n/a	35.7	30.1	26.2	26.9	35.3
NAAQS	80 $\mu g/m^3$					

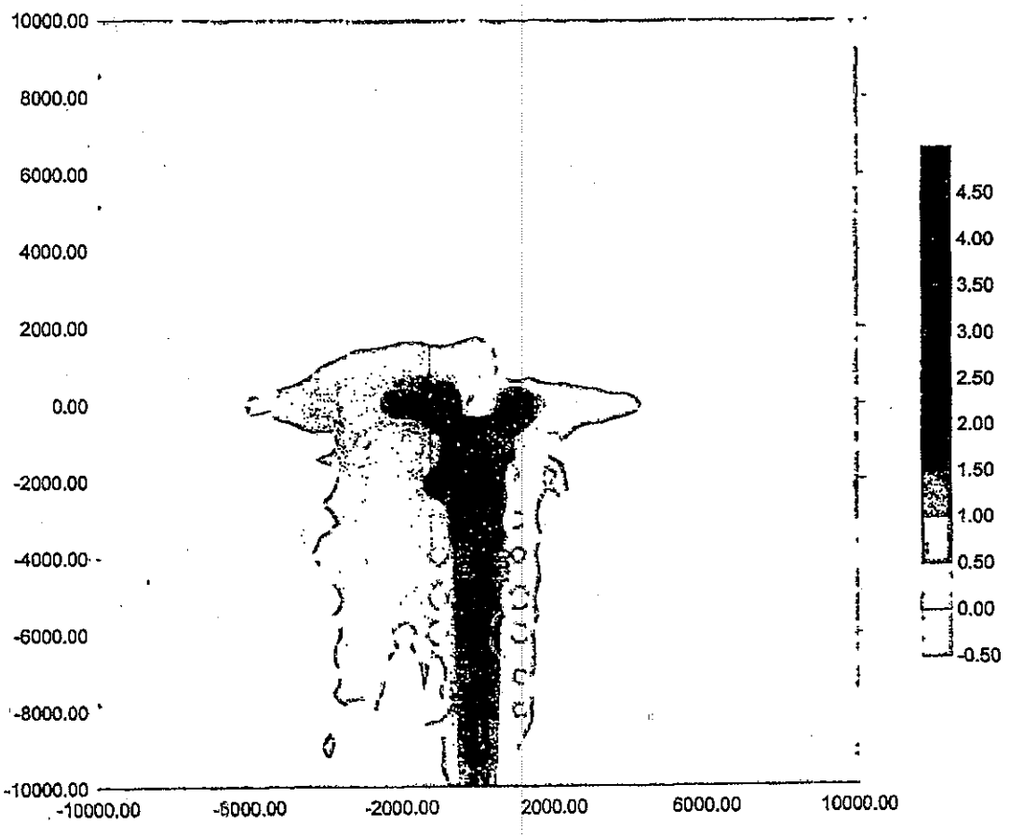


FIGURE VIII-4: PREDICTED MAXIMUM 24 HOUR GLC ($\mu G/M^3$) OF NOX WITH NO CONTROL – DG SET

Amongst all other pollutants, NO_x concentrations caused by diesel generator sets without control cause a maximum increase towards total NO_x at the receptor locations. Maximum concentration occurs at (0.00,-1000.0).

Although the probability of the worst-case scenario (i.e. 24 hour operation, meteorology conditions) is unlikely, the provision of NO_x retarders and a combined increased stack height is recommend in the Environment Management Plan. These mitigation measures will reduce NO_x levels to within permissible range.

TABLE VIII-4 - CO LEVELS AT DIFFERENT LOCATIONS (8 HOURLY MAXIMUM GLC IN $\mu G/M^3$) WITH NO CONTROL – DG SET

Concentration ($\mu g/m^3$)	Maximum 8 Hour GLC	AQ1	AQ2	AQ3	AQ4	AQ5
CO Contribution from Site	4.51	0.7	0.2	0.6	1.8	0.2
CO Baseline (Maximum)	n/a	1300	1500	1200	1000	1700
Total CO	n/a	1300.7	1500.2	1200.6	1001.8	1700.2
NAAQS	4000 $\mu g/m^3$					

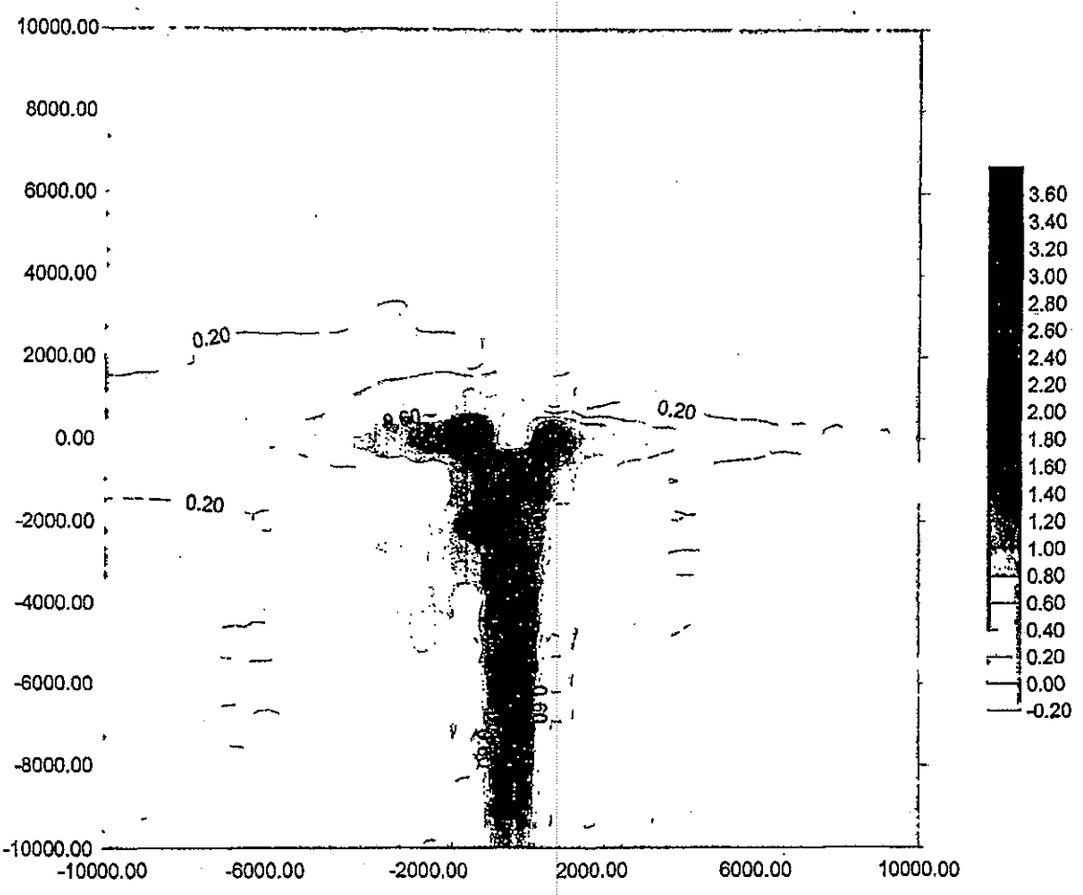


FIGURE VIII-5: PREDICTED MAXIMUM 8 HOUR GLC ($\mu G/M3$) OF CO WITH NO CONTROL – DG SET

The CO concentrations caused by diesel generator sets without control, does not cause a significant increase towards total concentrations of CO and remain below the standard. Maximum concentration occurs at the receptor with coordinates (0.00,-1000.0).

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Annexure IX

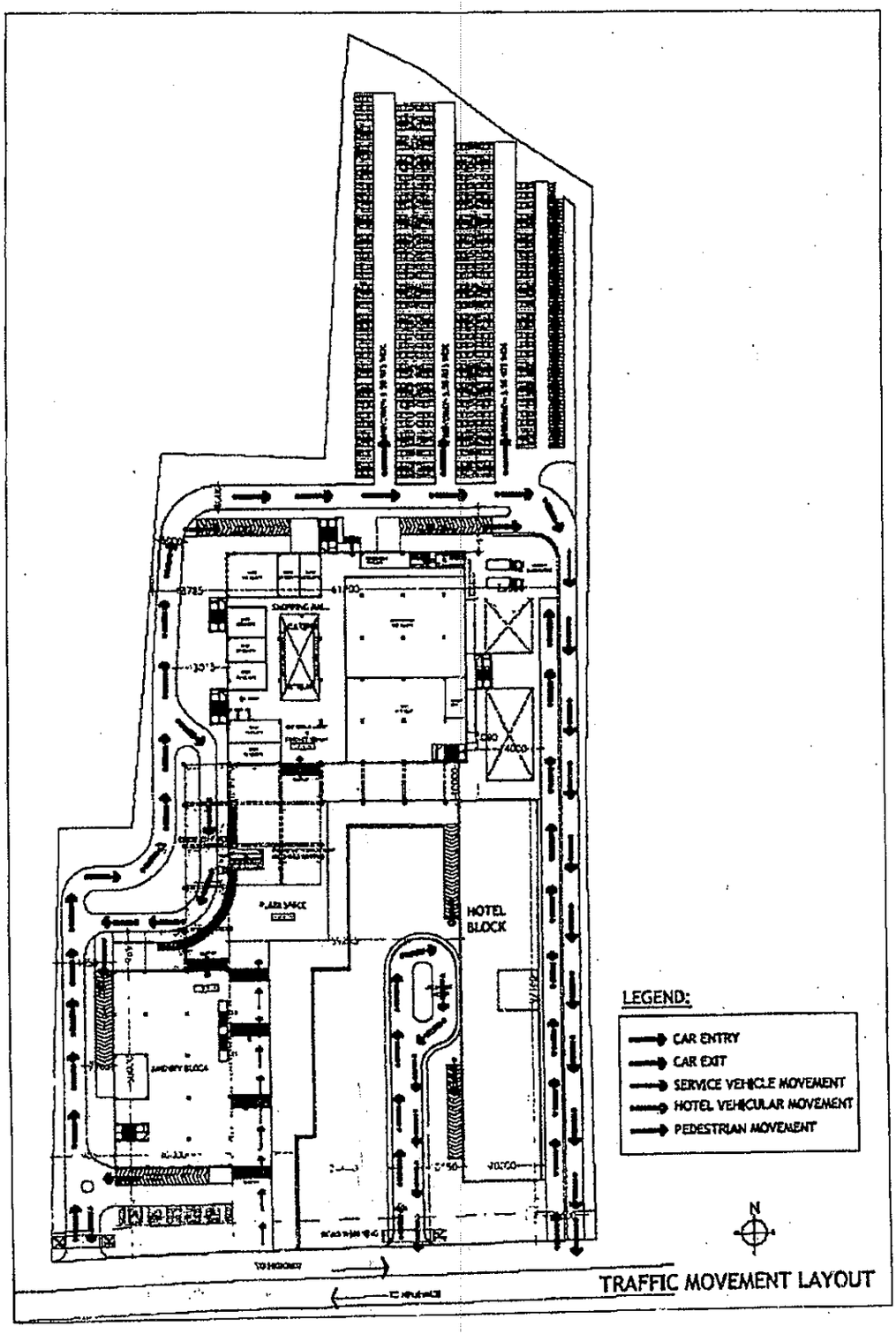
Layout of Internal Roads

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ANNEXURE IX

LAYOUT OF INTERNAL ROADS



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Annexure X

Details of Material Used

ANNEXURE X

DETAILS OF MATERIAL USED FOR COMMERCIAL PURPOSES

Wall in construction (Concrete wall outside and inside)				R value (per inch)	Total R value	
		Thickness in mm	Thickness in inch	Deg f per BTU)/(hr)sq.ft	Deg f per BTU)/(hr)sq.ft	m^2.deg c / W
1	External Plaster	20	0.8	0.2	0.160	
2	Concrete Block	150	6	0.6	3.600	
3	Extruded Polystyrene insulation	65	2.6	5	13.000	
3	Internal Gypsum plaster	18	0.72	0.39	0.281	
4	Inside film cooeff.			0.68	0.680	
5	Outside Film coeff.			0.25	0.250	
	Total Resistance				17.811	3.137
					Btu/hr. ft^2. ^0F	**W/m^2. Deg**
	U value(1/ R)				0.056	**0.319**

ECBC Guidelines clause 4.3.3 U factor for walls 0.369 for hotels and hospitals, 0.352 for other buildings W/m^2. Deg Max.

Roof in construction				R value (per inch)	Total R value	
		Thickness in mm	Thickness in inch	Deg f per BTU)/(hr)sq.ft	Deg f per BTU)/(hr)sq.ft	m^2.deg c / W
1	Concrete Slab	200	8	0.6	4.800	
2	Extruded Polystyrene insulation	75	3	4.34	13.020	
3	Compact Soil fill	500	20	0.16	3.200	
4	Internal plaster	12	0.48	0.2	0.026	
5	inside film cooeff.			0.92	0.920	
6	Outside Film coeff.			0.25	0.250	
	Total Resistance				22.216	3.912
					Btu/hr. ft^2. ^0F	**W/m^2. Deg**
	U value(1/ R)				0.045	0.255

ECBC Guidelines clause 4.3.1 U factor for roof 0.261 for hotels and hospitals and 0.409 for other buildings W/m^2. Deg Max.

Non North Fenestrations			
	Double Pane Window	R Value	
1	External Air Film	0.03	
2	Double Pane Glass 6 mm tinted Heat strengthened external glass with 12 mm air gap and 6 mm heat strengthened internal clear glass	0.35	
3	Inside Air film	0.12	
	Total Resistance	0.5	**m^2.deg c / W**
	U value(1/ R)	2.00	**W/m^2. Deg^C**

ECBC Guidelines clause 4.3.4 U factor for non-north fenestrations 3.177 W/m^2. Deg Max.

For vertical fenestrations North Orientation 6.922 W/m^2. Deg Max (clause 4.3.4) that is fulfilled by 6mm clear float glass with 5.7 W/m^2. Deg Value.

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Annexure XI

Noise Modelling

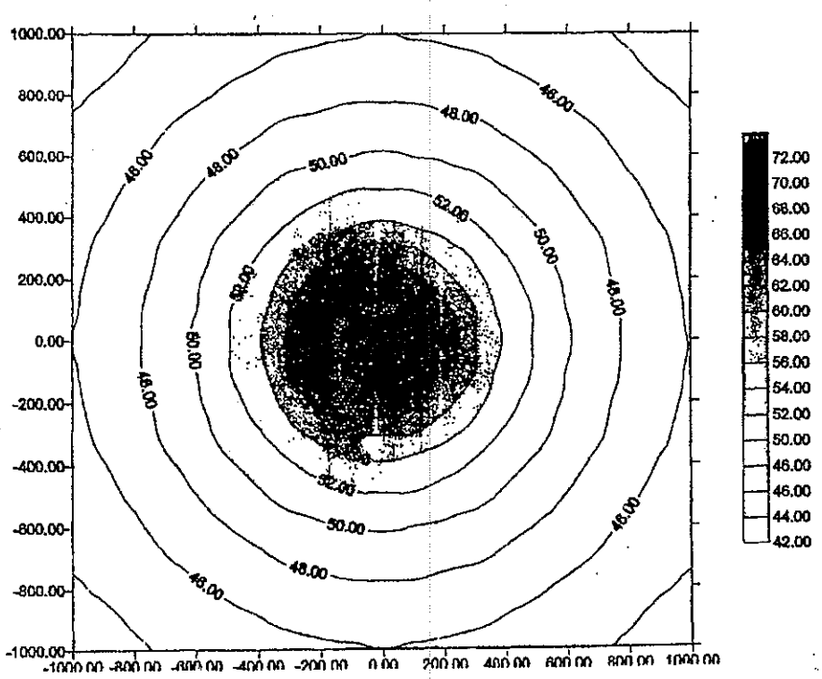
ANNEXURE XI

TABLE XI-1: NOISE LEVELS GENERATED FROM CONSTRUCTION EQUIPMENT

Name of Source	Noise Level at 1 m from source (calculated) in dB(A)
Air Compressor	111
Back Hoe/Loader	105
Concrete Mixer Truck	109
Concrete Pumper	94
Concrete Vibrators	101
Cranes - mobile	105
Dump Truck	107
Generator	75 (as prescribed by CPCB)
Hammering	110
Jackhammer	112
Pile Driver	124
Radial Arm Saw	104

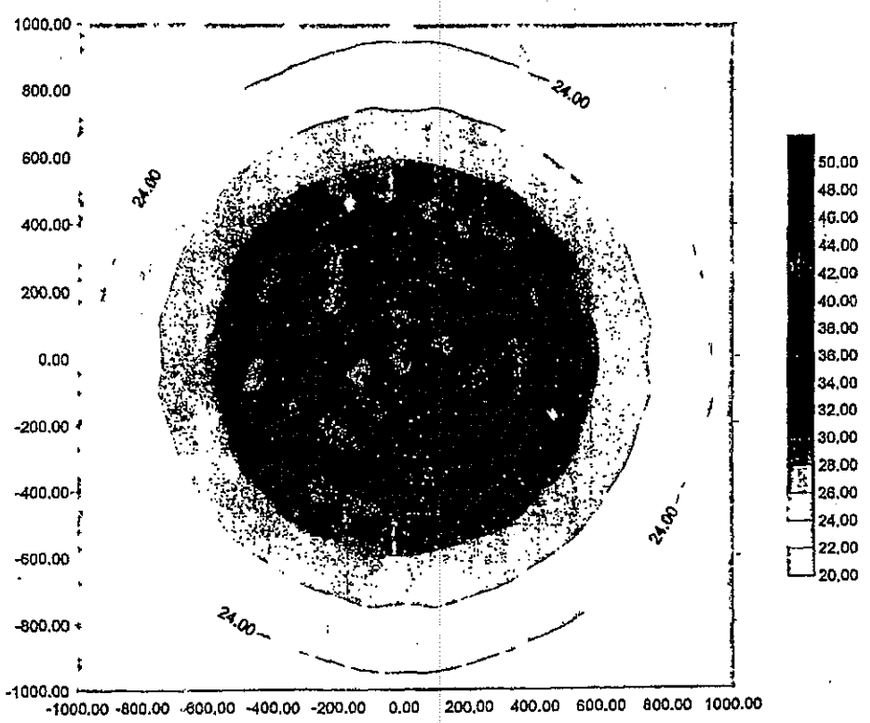
Source: www.gvrd.bc.ca/education/pdf/04/ColumbiaWorkshop1-ConstructionNoise.pdf

FIGURE XI-1: SPATIAL VARIATION OF CONSTRUCTION EQUIPMENT NOISE LEVELS AROUND THE PROJECT SITE WITHOUT CONTROL



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FIGURE XI-2: SPATIAL VARIATION OF DG-SETS NOISE LEVEL AROUND THE PROJECT SITE DURING OPERATION PHASE WITHOUT CONTROL



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Annexure XII

Details of In Vessel Composting

ANNEXURE XII

'IN VESSEL COMPOSTING PROCESS

Principle of the process

1. Whatever can be recycled, must be recycled,
2. Whatever can be composted must be composted,
3. Hazardous, bio-medical and industrial solid waste must not find way into MSW and
4. Whatever is inert only may go for sanitary landfill.

Objective of the process

1. To treat biodegradable fraction of Municipal Solid Waste (MSW) so as to mitigate the problems associated with MSW like foul odour, spread of disease and uncleanliness.
2. To produce valuable organic fertilizer.
3. To recover valuable material.
4. Reduce the load on landfill.

Procedure

1. The segregated solid waste arrives at 'TIVAS BIO-COM' process site.
2. Biodegradable matter undergoes size reduction through a shredder.
3. TIVAS Vessels are used in the project.
4. Everyday suitable microbial inoculant is mixed with shredded biodegradable matter.
5. The biodegradable matter will remain in the vessel for 5 days (minimum).
6. The organic fertilizer is taken out from vessel after 5 days.
7. After maturation for about 10 days, the organic fertilizer is enriched with suitable microbial inoculant
8. Suitable microbial inoculant.

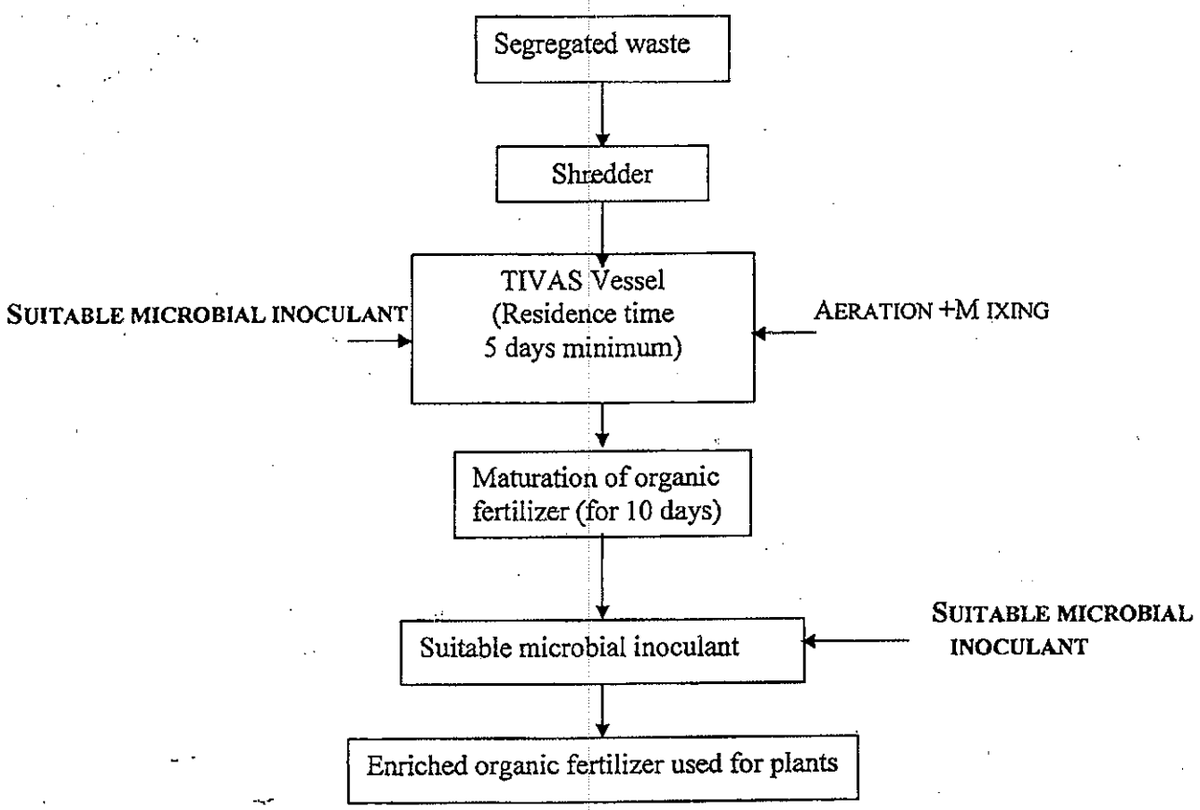
Benefits

The process provides complete system for treatment of Biodegradable Waste. It

1. Works round the year.
2. Provides a scientific method for the production of organic fertilizer.
3. Elimination of foul odour.
4. Elimination of Pathogens and weed seeds.

5. Problem of rodents and insect pests is avoided.
6. Aesthetically acceptable.
7. Treatment time is substantially reduced.
8. Eco-friendly and Economical
9. Load on the landfill is reduced.

Schematic flow diagram of Solid Waste Management based on 'TIVAS BIO-COM' process



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Annexure XIII

Environmental Management Plan

ENVIRONMENTAL MANAGEMENT PLAN

1.1 INTRODUCTION

The Environmental Management Plan (EMP) is a site specific plan developed to ensure that the project is implemented in an environmentally sustainable manner where all stakeholders including the project proponents, contractors and subcontractors, including consultants, understand the potential environmental risks arising from the proposed project and take appropriate actions to properly manage that risk. Adequate environmental management measures need to be incorporated during the entire planning, construction and operating stages of the project to minimize any adverse environmental impact and assure sustainable development of the area. The EMP is proactive in nature and should be upgraded if new facilities or modification of existing facilities, with environmental concerns, come up at a later stage.

The EMP is generally:

- Prepared in accordance with rules and requirements of the MoEF and the State Pollution Control Board
- To ensure that the component of facility are operated in accordance with the design
- Process that confirms proper orientation through supervision and monitoring
- System that addresses public complaints during construction and operation phase
- Plan that ensure remedial measures are implemented immediately

The key benefits of the EMP are that, it provides the organization with means of managing its environmental performance thereby allowing it to contribute to improved environment quality. The other benefit includes cost control an improved relation to stakeholders.

EMP includes four major elements:

- Commitment and Policy: PSC Pacific will strive to provide and implement the Environmental Management Plan that incorporates all issues related to air, land and water.
- Planning: This includes identification of environmental impacts, legal requirements and setting environmental objectives.
- Implementation: This comprises of resources available to the developers, accountability of contractors, training of operational staff associated with environmental control facilities and documentation of measures to be taken
- Measurement and Evaluation: This includes monitoring, corrective actions, and record keeping.

It is suggested that as part of EMP, a monitoring committee should be formed by Xion site in charge, project planning group representative, environmental group representative and project implementation team representative. This committee's role would be to ensure proper, operation and management of the EMP including the regulatory compliance.

1.2 ENVIRONMENT MANAGEMENT PLAN - AIR

An environmental management plan (EMP) will be required to mitigate the adverse environmental impacts during construction and operational phase of the project and these are as below:

1.2.1 EMP FOR AIR ENVIRONMENT

CONSTRUCTION PHASE

To mitigate the impact of SPM (dust) as discussed earlier during the construction phase of the proposed project, the following measures are recommended for implementation:

- A dust control plan; and
- Procedural changes to construction activities.

TABLE 1.1: DUST CONTROL PLAN

Fugitive Dust Source Category	Dust Control Actions	Cost Distribution
Earth-moving	**1a.** For any earth moving which is more than 30m from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100m in length in any direction.	1a. Associated pumping costs.
Disturbed surface areas (except completed grading areas)	**2a.** Apply dust suppression in a sufficient quantity and frequency to maintain a stabilized surface; **2b.** Areas, which cannot be stabilized, as evidenced by wind driven dust, must have an application of water at least twice per day to at least 80 percent of the unstabilized area.	2a. Chemical cost 2b. Associated pumping costs.
Disturbed surface areas (completed grading areas)	**2c.** Apply water to at least 80 percent of all inactive accessible disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust.	2c. Associated pumping costs.
Inactive disturbed surface areas	**3a.** Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR 3b. Utilize any combination of control actions 2c, 2d, or 3a such that, in total, they apply to all inactive disturbed surface areas.	3a. Chemicals cost 3b. n/a
Unpaved roads	**4a.** Water all roads used for any vehicular traffic at least twice per day of active operations; OR **4b.** Water all roads used for any vehicular traffic once daily and restrict vehicle speed to 15 mph.	4a. Associated pumping costs. 4b. Associated sprinkling costs
Open storage piles	**5a.** Apply water to at least 80 percent of the surface areas of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR **5b.** Install a three-sided enclosure with walls with no more than 50 percent porosity that extends, at a minimum, to the top of the pile.	5a. Associated pumping costs. 5b. Enclosure costs
Track-out control	**6a.** Downwash of trucks (especially tyres) prior to departure from site.	6a. Associated pumping costs.

The most cost-effective dust suppressant is water, because a source of water tends to be readily available on the construction site at site. Water can be applied using water trucks,

handheld sprays and automatic sprinkler systems. Furthermore, incoming loads could be covered to avoid loss of material in transport, especially if material is transported off-site.

Procedural Changes to Construction Activities

Material Production - The transport of materials such as concrete and asphalt to construction sites generate significant amounts of road dust, especially for sites that are relatively far from material manufacturers. Setting up temporary portable concrete plants and/or asphalt plants at construction sites can eliminate haulage of materials.

Emission Control for Equipment – Control equipment such as particle filters can be used to reduce diesel particulate matter emissions, and diesel oxidation catalysts (DOCs).

Idling Time Reduction - Construction equipment is commonly left idling while the operators are on break or waiting for the completion of another task. Emissions from idling equipment tend to be high, since catalytic converters cool down, thus reducing the efficiency of hydrocarbon and carbon monoxide oxidation. Existing idling control technologies, which automatically shut the engine off after a preset time can reduce emissions, without intervention from the operators.

Improved Maintenance - Recognizing that significant emission reductions can be achieved through regular equipment maintenance, contractors will be asked to provide maintenance records for their fleet as part of the contract bid and at regular intervals throughout the life of the contract. A monetary incentive/disincentive provision will be established to encourage contractors to comply with regular maintenance requirements.

Reduction of On-site Construction Time - Rapid on-site construction would reduce the duration of traffic interference and therefore, reduce emissions from traffic delay. Off-site fabrication of structural components can also enhance the quality of work, as the production takes place in controlled settings and external factors such as weather and traffic do not interfere.

OPERATIONAL PHASE

To mitigate the impact of pollutants from diesel generator sets and vehicular traffic during operational phase, the following measures are recommended for implementation:

- D.G set air pollution control measures
- Vehicle emission controls and alternatives

D.G set air pollution control measures

- Use of good quality fuel with low sulphur content
- Periodic maintenance of DG sets as per defined schedule of manufacturer

- Maintaining adequate stack heights

Vehicle emission controls and alternatives

Flow of Vehicle - Sudden acceleration or de-acceleration of vehicles produces more pollution than a vehicle maintaining a constant speed. Smoother flow of traffic within the parking area and premises of residential and commercial areas would ensure lesser pollution from the vehicles.

Entry and Exit of Vehicles – Retail area of the project will have frequent movement of vehicles. To ensure least interference from incoming and outgoing vehicles, it is suggested that entrance and exit points of the vehicles should be different. Dedicating atleast one entry and exit to pedestrians will reduce interference in vehicular movement.

Anti-Idling – The multilevel parking in both the residential and retail area will carry signs warning the vehicle driver against idling within the parking lot.

Traffic Management Team – A team of trained staff will be appointed for monitoring traffic movement inside the parking space and at entrance and exit points of the premises.

1.3 NOISE CONTROL AND MANAGEMENT PLAN

CONSTRUCTION PHASE

Construction stage causes an increase in ambient noise levels within a 200m would occur due to traffic movement and construction equipments. The particular location of the building ensures that there are fewer receptors for the noise pollution produced by the construction activity. The project area itself is very large, and consists of a large number of trees near the site boundary as well as in other areas. Thus, the noise generated would mainly affect the workers on project site.

Heavy construction activity should be preferred during day time, considering that residential buildings are present in the vicinity of project site. Thus, there would be no effect on the people residing in the area.

Hearing protection – Earplugs are provided to those working very close to the noise generating machinery.

Noise reduction – Strict codes for construction is implemented where unnecessary noise generating activity such as honking is avoided wherever possible.

OPERATIONAL PHASE

Possible mitigation measure for further reduction of noise could include:

- Acoustic enclosure for the DG sets will be provided as required in the Power Generator MoEF notification.
- Strict adherence to maintenance schedule of generators, as specified by vendors.
- Staff to use earplugs inside DG room.
- Anti honking sign boards will be placed in the parking areas and on entry ad exit points.
- Air conditioning system in the retail will be serviced and maintained regularly as per manufacturer's guidance, to ensure that noise emissions are low.

1.4 WASTEWATER TREATMENT AND MANAGEMENT

A) CONSTRUCTION PHASE

To prevent degradation and maintain the quality of the water source, adequate control measures have been proposed to check the surface run-off, as well as uncontrolled flow of water into any water body. Following management measures are suggested to protect the water quality during the construction phase.

- Avoid excavation during monsoon season.
- Check dams should be provided to prevent construction runoff from the site to the surrounding water bodies.
- Pit latrines and community toilets with temporary soak pits and septic tanks shall be constructed on the site during construction phase to prevent wastewater from entering the water bodies.
- No discharge of wastewater to soil and ground water body.
- Any area with loose debris within the site shall be planted.
- To prevent surface and ground water contamination by oil/grease, leak proof containers should be used for storage and transportation of oil/grease. The floors of oil/grease handling area should be kept effectively impervious. Any wash off from the oil/grease handling area or workshop shall be drained through impervious drains, Clarifiers or oil/water separators shall be constructed and effluent should be treated appropriately before releasing it.
- Construction activities generate disturbed soil, concrete fines, fertilizer, oils and other wastes. On-site collection and settling of storm water, prohibition of equipment wash downs, and prevention of soil loss and toxic releases from the construction site are necessary to minimize water pollution.
- All stacking and loading areas should be provided with proper garland drains equipped with baffles to prevent run off from the site to enter any water body.

B) OPERATION PHASE

Sustainable ground water extraction plan be evolved considering the water demand of the project in its operation phase. Water conservation and development measures need to be taken including all possible potential for reuse and recycling of water. These could be in the form of the following:

- Development of water sources
- Minimizing water consumption
- Promoting reuse of water after treatment and development of closed loop systems for different water streams.

Water Source Development

Water source development shall be practiced by installation of scientifically designed artificial water recharging structures. The objective is to develop the water sources of the region, such that sustainable water supply to the proposed township as well as for community water supply schemes is maintained. Artificial recharge is normally done by following methods:

- Area Treatment
- Spreading Methods
- Open Well and Shafts
- Drilled wells and Bore Holes
- Bank Infiltration
- Sand storage Dams

The suitability of a particular method is based on hydro-geological condition, quality of source and proposed use of recharge water. Considering the hydrogeology and aquifer characteristics (discontinuous deep aquifer) of the area, the most suitable kind of recharge method for the project area is drilled well and bore hole. Here water is fed directly into the depleted aquifer by providing a conduit access, such as tube well or shaft or connector well. In this method water is not pumped into the aquifer but allowed to percolate through a filter bed, which comprises sand and gravel. The system comprises of generally a borehole, 500 mm diameter, which is drilled to the desired depth depending upon the geological conditions, preferably 2 to 3 m below the water table in the area. Inside this hole a slotted casing pipe of 200 mm diameter is inserted. The annular space between the borehole and the pipe is filled with gravel and developed with a compressor till it gives clear water. To stop the suspended solids from entering the recharge tube well, a filter mechanism is provided at the top.

Rainwater harvesting Details:

The rainwater harvesting will be done through percolation wells. The harvested water will be used for artificial recharge and part quantity will be stored. It is estimated that the likely

anticipated rainfall shall be about 700 mm /Year (Average) as applicable for Pune Region. Following are the details of rainwater harvesting proposed at the site.

- Area of plot : 7.771 Acres
  : 31,451Sq.m.
- Rainfall Intensity assumed 700 mm per year.

  So, average rainfall Intensity
  : 31,451 X 0.7
  : 22015 m^3/yr
  : 22 Ml/yr

  Considering around 26.5 % run off losses:-

  Intensity of rainfall : 22 X 0.75
  : 16.5 Ml/yr

But Daily Demand of Water is 209m^3/day

Therefore quantity of daily demand of water met by rainfall =
: 16.5 / 0.2
: 82 days
: i.e 2.7 months

Minimizing Water Consumption

Water consumption will be minimized by a combination of water saving devices and other domestic water conservation measures. Furthermore, to ensure ongoing water conservation, an awareness programme will be introduced for all Xion occupants. Following section discusses the specific measures, which shall be implemented:

Domestic and Commercial Usage:

- Use of water efficient plumbing fixtures (ultra flow toilets and urinals, low flow sinks, water efficient dishwashers and washing machines). Water efficient plumbing fixtures use less water with no marked reduction in quality and service.
- Leak detection and repair techniques.
- Re-circulation of swimming pool overspill after treatment.
- Sweep with a broom and pan where possible, rather than hose down for external areas;
- Meter water usage, employ measurement and verification methods. Monitoring water use is a precursor for management.
- Awareness campaign to disseminate knowledge on strategies and technologies that can be used for water conservation.

Horticulture:

- Drip irrigation system shall be used for the lawns and other green area. Drip irrigation can save between 15-40% of the water use, compared with other watering techniques.
- Plants with similar water requirements shall be grouped on common zones to match precipitation heads and emitters.
- Use of low-volume, low-angle sprinklers for lawn areas.
- Select controllers with adjustable watering schedules and moisture sensors to account for seasonal variations, and calibrate them during commissioning.
- Selecting a drought resistant grass, and using lawn chemicals and fertilizer sparingly also reduces watering needs.
- Place 3 to 5 in. of mulch on planting beds to minimize evaporation.

Promoting Reuse of Water after Treatment and Development of Closed Loop Systems

To promote reuse and development of closed loop system for water, segregation of two schemes namely (i) Wastewater Treatment scheme; and (ii) Storm water management scheme have been suggested.

Harvested storm water as discussed in earlier section, shall be utilized for artificial recharge of ground water sources and wastewater shall be reused on site after treatment.

Treated water can be used for A/C make up and landscaping. It is estimated that reusing wastewater will save approximately 35 to 40 % of potable water per day in Xeon. Following section details the wastewater treatment scheme suggested for the project.

Waste Water Treatment Scheme:

Sanitation infrastructure shall comprise of following:

- Wastewater collection and conveyance system
- Wastewater treatment and disposal arrangement

Wastewater collection and conveyance system shall be an underground drainage network that will be designed to collect wastewater from each and every household and convey it to one point for treatment.

As described earlier, approximately 306m^3/day of sewage will be treated in a state of the art sewage treatment plant. Separate pipelines will be laid for using this water. Treated wastewater shall be used for landscaping and for A/C make up. The sludge generated would be sent for composting after drying.

1.5 STORMWATER MANAGEMENT

As discussed earlier, most of the storm water produced on site will be harvested for ground water recharge, thus proper management of this resource is must to ensure that it is free of contamination. Contamination of storm water is possible from the following sources:

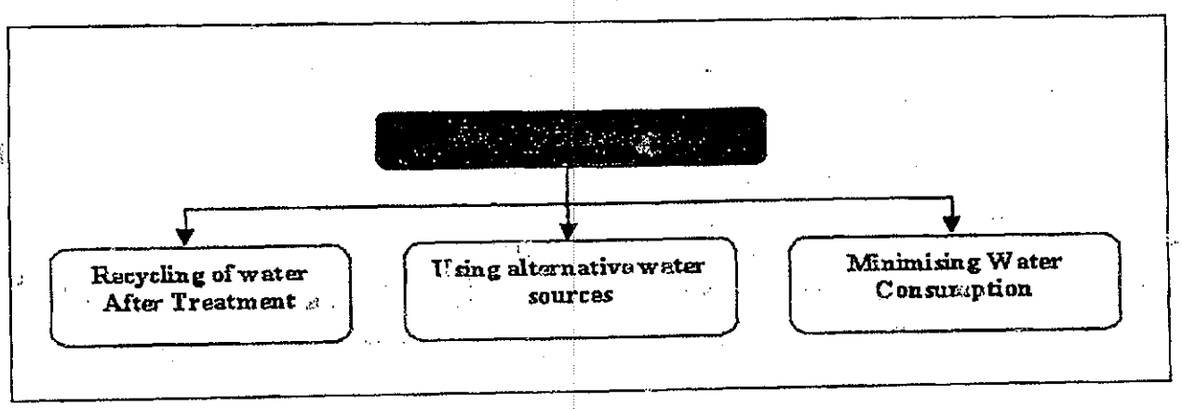
- Diesel and oil spills in the Diesel Power Generator and fuel storage area
- Waste spills in the Solid/ hazardous waste storage area
- Oil spills and leaks in vehicle parking lots
- Silt from soil erosion in gardens
- Spillage of sludge from sludge drying area of sewage treatment plan.

A detailed "Storm Water Management Plan" will be developed which will consider the above sources. The plan will incorporate best management practices which will include following:

- Regular inspection and cleaning of storm drains.
- Clarifiers or oil/water separators shall be installed in all the parking areas. Oil/water separators installed for parking areas and garages will be sized according to peak flow guidelines. Both clarifiers and oil/water separators must be periodically pumped in order to keep discharges within limits.
- Cover waste storage areas.
- Avoid application of pesticides and herbicides before wet season.
- Secondary containment and dykes in fuel/oil storage facilities.
- Conducting routine inspections to ensure cleanliness.
- Preparation of spill response plans, particularly for fuel and oil storage areas.
- Provision of slit traps in storm water drains.
- Good housekeeping in the above areas.

1.6 WATER CONSERVATION AND DEVELOPMENT

The water conservation plan consists of a combination of three major steps depicted below:



Xion's development will be carried out in phases and will reach its peak in year 2010. The commercial complex will generate floating population, thus the quantity of waste generated will vary. However, on an average waste generation will be constant, and a broad outline on reducing the effect of solid waste on the environment is given below.

CONSTRUCTION PHASE

Wastes from construction activity include construction debris, biomass from land clearing activities, and. hazardous waste. The following section discusses management of each type of waste. Besides waste generation, management of topsoil is an important area for which management measures are required

Being predominantly inert in nature construction waste does not cause chemical or biological pollution. Hence, maximum effort should be done to reuse the waste.

- Saleable items such as metal scrap should be kept separately and cleared off as soon as possible.
- Large unusable material should be sent for land-filling in designated areas of concerned authority.
- Recycled aggregate will be used for filler application, and as a sub-base for road construction. Mixed debris with high gypsum, plaster, shall not be used as fill, as they are highly susceptible to contamination, and will be given to recyclers.
- Top soil excavated should be collected and stored and reused for landscaping and plantation.

Waste from Labour Colonies and Biomass

Waste generated from labour camps will mainly comprise of household domestic waste, which shall be collected and composted on site along with the biomass from the land clearing activities. The non-compostable and non-recyclable portion of the waste shall be collected and transported to the nearest landfill site

OTHER WASTE

Construction sites are sources of some toxic substances, such as paints, solvents, adhesives and sealants. Empty containers of these substances shall be returned back to the manufacturers or dealers as the case may be.

Some management practices to be developed are,

- Paintbrushes and equipment for water and oil based paints shall be cleaned within a contained area and shall not be allowed to contaminate site soils, watercourses, or drainage systems.

- Provide adequate hazardous waste storage facilities and taking away by the supplier any balance material after use.
- Clearly label all hazardous waste containers with the waste being stored and the date of generation.
- Educate employees and subcontractors on hazardous waste storage.
- Instruct employees and subcontractors in identification of hazardous and solid waste.

OPERATION PHASE

In the operation phase only organic and inorganic waste will be generated from residential and commercial activities. Apart from organic waste or food scrap the commercial area will generate cardboards, paper and plastics in considerable amount.

Collection and Transportation

- During the collection stage, the biodegradable and non-recyclable/non biodegradable waste will be stored and collected separately. Only the non-recyclable and non-biodegradable waste will be deposited at a landfill site. Biodegradable waste will be composted or treated for other purposes. Refer **Figure 1.1** for the waste management system.
- To minimize littering and odors, waste will be stored in well-designed containers/bins that will be located at strategic locations to minimize disturbance in traffic flow.
- The collection vehicles will be well maintained to minimize noise and emissions, and while transporting waste, these will be covered to avoid littering.

Treatment

The segregated biodegradable waste will be composted using suitable composting techniques. The finished product, i.e. the compost can be utilized in the parks and green area or can be sold.

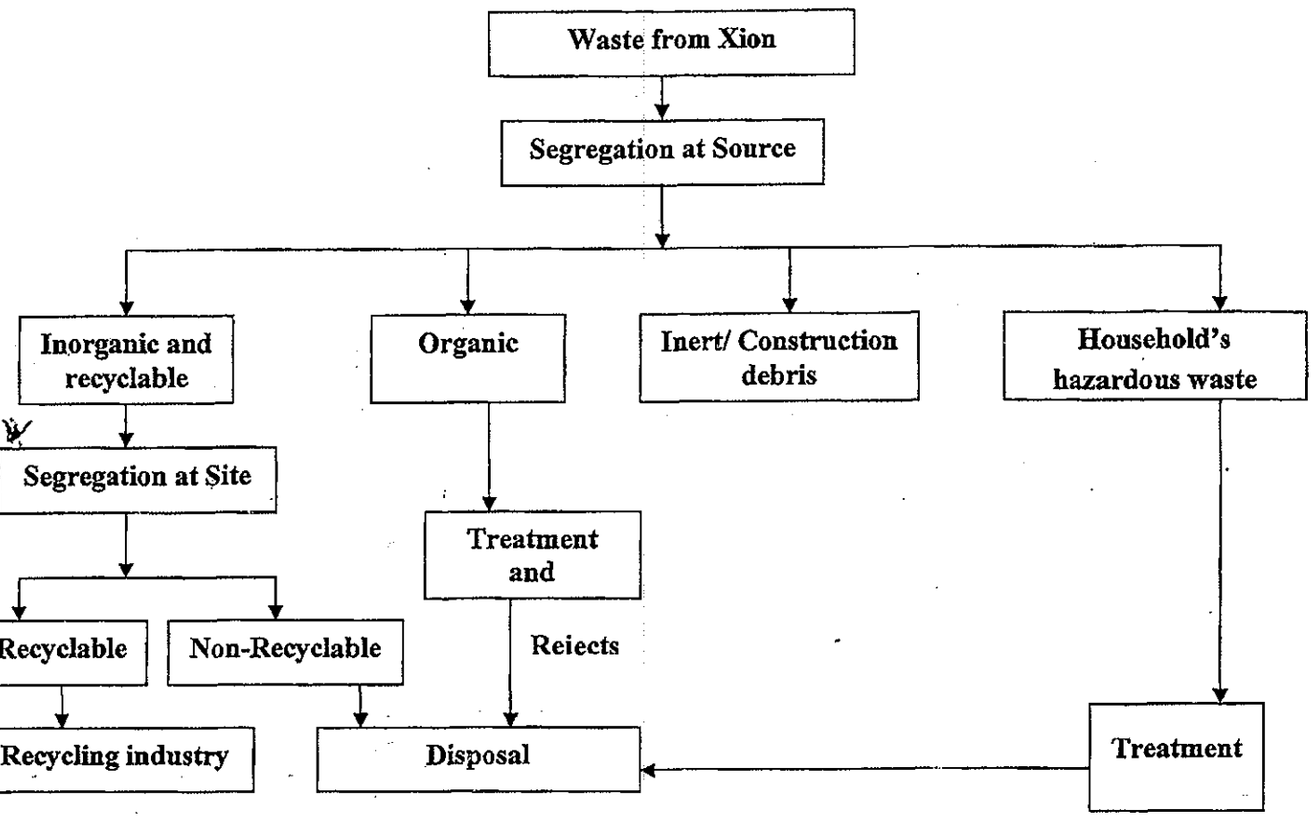
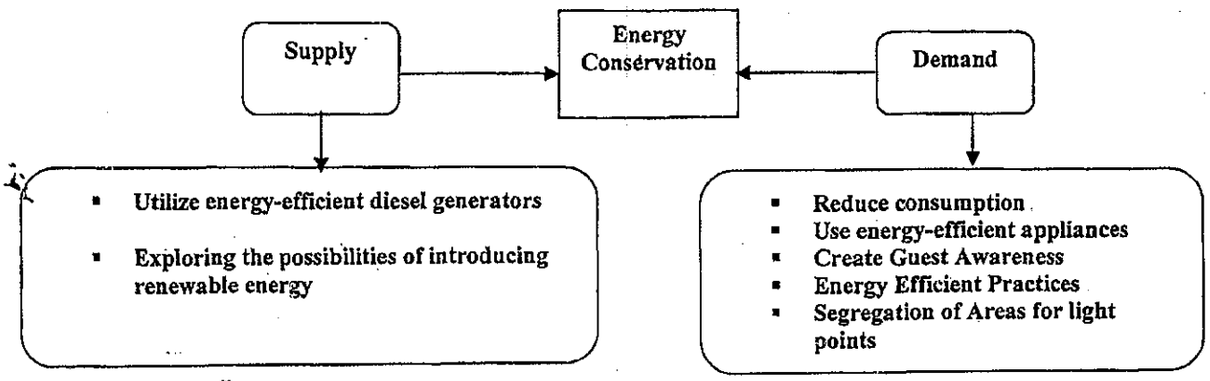


FIGURE 1.1: WASTE MANAGEMENT SYSTEM

1.8 ENERGY CONSERVATION

Energy conservation measures are often the easiest, quickest and cheapest way to reduce costs and be environmentally pro-active



Energy conservation program will be implemented through measures taken both on energy demand and supply.

Energy conservation will be one of the focuses during the Xion planning and operation stages. The conservation efforts would consist of the following:

Architectural design

- Public areas will be cooled by natural ventilation as opposed to air conditioning
- Maximize the use of natural lighting through design
- Passive solar cooling utilizing building shading through overhangs
- Considering energy conservation aspects into building design

Energy Saving Practices

- Promoting use of solar water heating
- Purchase of energy efficient appliances
- Constant monitoring of energy consumption and defining targets for energy conservation
- Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort levels
- Installing programmable on/off timers and sensors for low occupancy areas
- Use of compact fluorescent lamps and low voltage lighting.
- Sunscreen films on windows to reduce heating inside the buildings

Behavioural Change on Consumption

- Promoting awareness on energy conservation among the residents, employees and staff in the complex.
- Training staff, residents and employees on methods of energy conservation and to be vigilant to such opportunities

1.9 PLANTATION, LANDSCAPING AND ECOLOGICAL MANAGEMENT

The objective of the proposed development shall be to create environment that is pleasing, utilitarian and sensitive to the characteristics of the site and its surrounds. The development shall be environmentally responsible. **Overall development policy** shall be as follows;

- To balance cut and fill within the site
- To remove and reuse top soil wherever available

A. Hard landscape:

The aim would be to minimize hardscape only to high intensity use areas. Afternoon sun being very harsh, hard areas will be shaded wherever possible.

Use of porous pavements, pavements interspersed with softscape, gravel areas will be promoted to increase ground water recharge and to reduce glare. The development being large, focus would be on standardization of certain hardscape items like kerbs, seats, retention systems, pavers etc in major areas, which will improve speed of work and economics of the development.

There will be emphasis on the use of local materials and environmental friendly materials like fly ash bricks.

B. Soft landscape

In terms of development pattern, water requirement and intensity of maintenance required, Softscape will be of two types

High intensity softscape: With manicured lawn, flower beds, shrubbery and trees groves of specimen trees

Low intensity softscape: Predominantly with native vegetation, trees as major element, grasses and groundcovers.

The distribution of high intensity and low intensity soft areas will approximately be 60: 40.

C. Garden waste disposal

Approximate estimated generation of garden waste in the form of clippings, cuttings, and fallen leaves will be around 1200 kg per day. Vermi-composting pits of size 2.35 Cu Mtr per ton shall be provided at number of suitable locations. These pits shall give the compost yield of the order of 230 -300 kg per ton of garden waste. This compost from various pits shall be utilized for gardening.

The project proponent has taken a proactive measure to plant numerous arboric species, which attract birds and butterflies, during the starting of the project. This result in the availability of enough feeding ground for birds and butterflies during the operational phase and there by increase the population of fauna in the project site.

During the construction phase, following precautions should be followed:

- Restriction of construction activities to defined project areas, which are ecologically less sensitive.
- Restrictions on location of labour camps and offices for project staff near the project area to avoid human induced secondary additional impacts on the flora and fauna species.
- Cutting, uprooting, coppicing of trees or small trees present in and around the project site for cooking, burning or heating purposes by the laborers will be prohibited and suitable alternatives for this purpose will be found.

- After completion of major construction work, the green belt will be developed with recommended plant species, as there will be no or less disturbance in these areas.
- Cutting, uprooting of existing plants in the periphery will be prohibited and other plants in the site will be minimized.
- After completion of soil work, temporary vegetation preferably grasses to be planted to minimize soil erosion.

OPERATION PHASE

Enhancement of the current ecology at the site will be done through the following measures:

- Plantation and Landscaping
- Green Belt Development
- Park and Avenue Plantation.

In green belt development, a suitable plantation matrix will be adopted for the green belt development. It will also include earth filling and providing manure, which may be required for the proper nutritional balance and nourishment of the sapling. Table 1.2 provides a list of some of the species suitable for plantation in the area.

TABLE 1.2: LIST OF PLANT SPECIES SUGGESTED TO BE PLANTED IN THE GREEN BELT AREA

Trees mass plantation		
Botanical name	Common name	Notes
Aegle marmelos	bel	
Phyllanthus emblica	amla	
Dendrocalamus strictus	bamboo	
Butea monosperma	palash	not on hills,medium
Pongamia glabra	karanj	large
Cassia fistula	bahawa	
Terminalia ballerica	behada	
Szygium cumini	jamun	
Careya arborea	kumbha	
Schleichera trijuga	kusum	native,accent
Morinda pubescens	bartondi	native,scented,dry,small
Madhuca longifolia	mahua	large
Thespesia populnea	bhendi	small
Sterculia urens	karu	large
Holoptelia integrifolia	monkey biscuit	large evergreen

Non Trees spreading		
Botanical Name	Common Name	Notes
Albizzia lebek	shirish	
Bauhinia purpurea		
Cassia grandis		quick growing, salmon pink

Xion Trees - spreading		
Botanical Name	Common Name	Notes
Cassia javanica		rose pink
Cassia nodosa		rose pink
Colvillea racemosa		
Delonix regia	gulmohar	
Erythrina indica	pangara	
Erythrina indica alba		
Erythrina indica var. parcellii	variegated pangara	
Lagerstroemia flos reginae	pride of India	
Mimusops elengi	bakul	
Parkia biglandulasa	tannu	
Peltophorum ferrugineum	copper pod	
Artocarpus incisa	bread fruit	
Putranjiva roxbughii		
Schleichera trijuga	kusum	slow
Amoora rohituka	rakta rohada	
Azadirachta indica	neem	
Ficus krishnae		small
Khaya senegalensis	senegal mahogany	
Pithocolobium saman	rain tree	
Sweitenia mahogany	mahogany	slow

Xion Trees - tall		
Botanical Name	Common Name	Notes
Citharexylum quadrangularae	fiddle wood	
Anthocephalus cadamba	kadamba	shade
Tabubuea pentaphylla	pink tabubuea	shade
Brassia actinophylla	umbrella	small
Chorisea speciosa		
Couroupita guianensis	shivlinga	
Jacaranda mimosifolia	nilmohar	
Podocarpus chinensis		small
Polyalthia longifolia serpentina	mini ashok	small
Mitchellia champaca	sochafa	
Alstonia scholaris	satveen	shade
Khaya senegelensis	senegal mahogany	shade
Terminalia catapa	badam	
Terminalia arjuna	arjun	shade
Begnonia megapotamica		

Xion Trees small		
Botanical Name	Common Name	Notes
Amherstia nobilis		
Bauhinia variegata	kanchan	

Xion Precinct II		
Botanical Name	Common Name	Remarks
Bauhinia monandra		
Bauhinia blakeana	Hongkong Orchid	
Brownea grandiceps		
Callistemon lanceolatus	Bottle brush	
	Golden bottle brush	
Cordia sebestena		
Erythrina crista galli		
Guaiacum officinals	lignum vitae	
Lagerstromia thorelli		
Milletia ovalifolia		
Magnolia grandiflora	Him Champa	scented
Melia azederach	persian lilac	
Mesua ferrea	Nagchampa	
Plumeria alba	champa	
Plumeria acutifolia		scented
Parkinsinia aculeata	jerusalem thorn	
Saraca indica	seeta ashok	
Tabubuea spectabilis		
Nyctanthus arbortritis	parijatak	scented

1.10 EMP FOR SOCIO-ECONOMIC ENVIRONMENT

The Social management plan has been designed to take proactive steps and adopt best practices, which are sensitive to the socio-cultural setting of the region.

Improved Living Conditions

PSC Pacific Pune project envisages addressing the wider goal of environmental protection through a social investment strategy in the communities around the facility. By investing in social project in the neighboring community, PSC Pacific seeks to increase the benefits to the local population and contribute towards meeting community's expectation of benefits from the project. The social strategy addresses the problems in the following ways

Income Generation Opportunity for Local Community

Xion project at Pune would provide an opportunity for employment of the local community as tender specification for construction and operation would include a favorable employment opportunities towards the local population. The main principles are outlined below:

1. Employment strategy would provide for preferential employment of local labour.
2. General recruitment procedures will be transparent, public and open to all.
3. Recruitment procedure would be publicized in advance.
4. There will be no discrimination on basis of gender, caste or other factors.

Contractors would be required to abide to employment priority towards locals and abide by the Indian labour laws regarding standards on employee terms and conditions. Following the appointment of the contractor, information on employment would be made available to the local community. Information would be provided on scale and duration of employment, type of available work and demand projection.

1.11 ENVIRONMENTAL MANAGEMENT SYSTEM AND MONITORING PLAN

For the effective and consistent functioning of the Xion, an Environmental Management System (EMS) should be established at the site. The EMS should include the following:

- An environmental management cell
- Environmental Monitoring
- Personnel Training
- Regular Environmental Audits and Corrective Action
- Documentation – Standard operating procedures Environmental Management Plans and other records

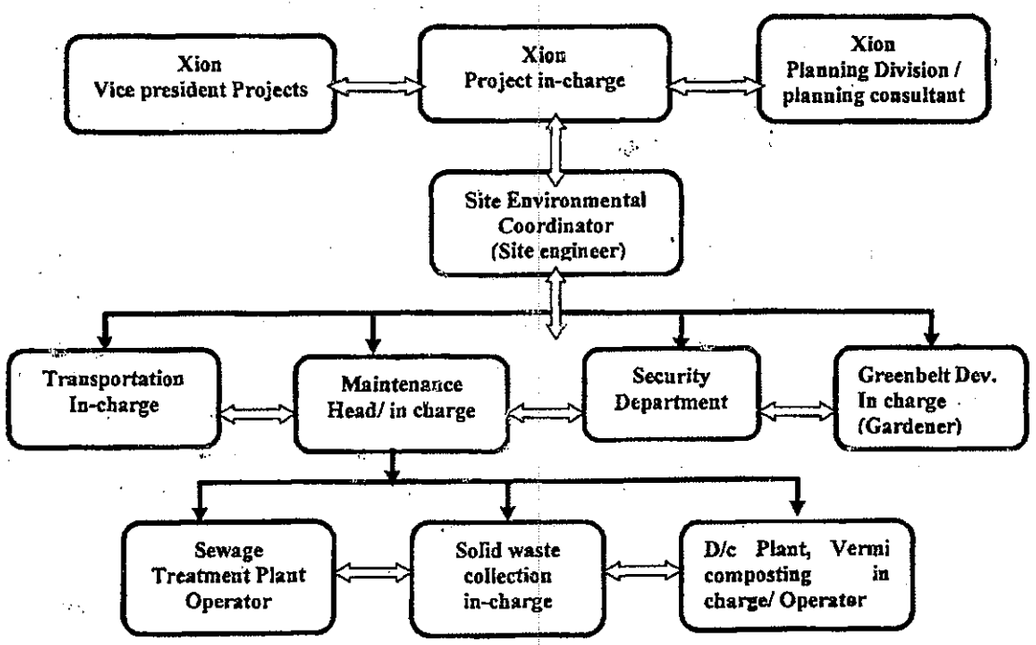
ENVIRONMENTAL MANAGEMENT CELL

Apart from having an Environmental Management Plan, it is also necessary to have a permanent organizational set up charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. The major duties and responsibilities of Environmental Management Cell shall be as given below:

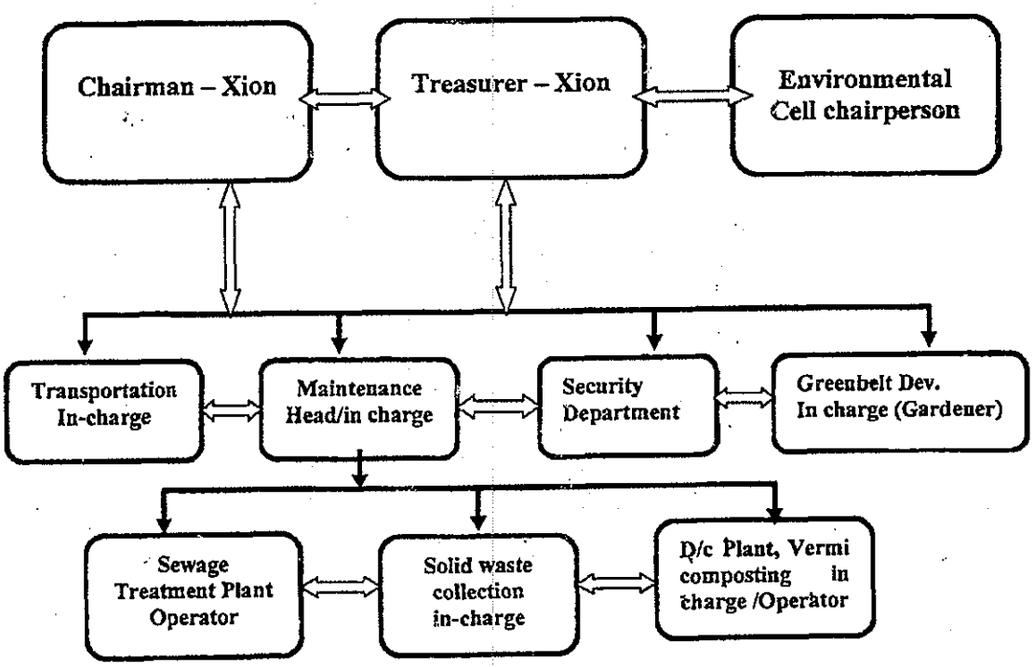
- To implement the environmental management plan,
- To assure regulatory compliance with all relevant rules and regulations,
- To ensure regular operation and maintenance of pollution control devices,
- To minimize environmental impacts of operations as by strict adherence to the EMP,
- To initiate environmental monitoring as per approved schedule.
- Review and interpretation of monitored results and corrective measures in case monitored results are above the specified limit.
- Maintain documentation of good environmental practices and applicable environmental laws as ready reference.
- Maintain environmental related records.
- Coordination with regulatory agencies, external consultants, monitoring laboratories.
- Maintain of log of public complaints and the action taken

Hierarchical Structure of Environmental Management Cell

A dedicated person who will report to the Xion site manager should supervise normal activities of the EMP cell. The hierarchical structure of a suggested Environment Management Cell is given in following **Figure 1.3.**



CONSTRUCTION PHASE



OPERATION PHASE

FIGURE 1.2: ENVIRONMENTAL MANAGEMENT CELL

1.12 ENVIRONMENTAL MONITORING

The purpose of environmental monitoring is to evaluate the effectiveness of implementation of Environmental Management Plan (EMP) by periodically monitoring the important environmental parameters within the impact area, so that any adverse affects are detected and timely action can be taken.

In consultation with Maharashtra Pollution Control Board (MPCB), the PSC Pacific will monitor ambient air quality, noise levels, groundwater quality and quantity, soil quality and solid wastes in accordance with an approved monitoring schedule. The monitoring protocol and location selection will have to done carefully. The monitoring sampling program should be discussed and approved by MPCB. A suggested monitoring protocol, based on the predicted impacts, is given in **Table 1.3.**

TABLE1.3: SUGGESTED MONITORING PROGRAM FOR XION

Sr. No.	Type	Locations	Parameters	Period and Frequency
1.	Ambient Air Quality	• Project Site • One Upwind and One downwind Locations	Criteria Pollutants: SO_2, N0x, SPM, PM_{10}, CO	24-hr average samples every quarter during operation and construction phase.
2.	Stack emission monitoring	Stack of any one operating DG set.	SO_2, NOx, SPM, CO,	Annual
4.	Groundwater Availability - Pumping test	Bore well on site and surrounding area based on hydrogeology	GW aquifer charging rate and discharge rate	Pre-monsoon and Post monsoon.
5.	Groundwater (Potability testing)	Project Site	Drinking water parameters as per IS 10500.	Pre-monsoon and post-monsoon.
6.	Ambient Noise	Project site and in the surrounding areas	dB (A) levels	Hourly Day and Night time Leq levels every quarter during construction phase and every year during operation phase.
7.	Treated sewage water quality	STP	Parameters for horticulture use - BOD, pH, S.S, Coliforms	As per vendor specifications
8.	Treated potable water quality	MIDC	As per IS 10500 – potable water standards	Every quarter
9.	Soil quality	In and around the site	Organic matter, C, H, N, Alkalinity, Acidity, heavy metals and trace metal. Alkalinity, Acidity.	Annual

Sr. No.	Type	Locations	Parameters	Period and Frequency
10.	Waste Characterization	All types of landuse	Physical and Chemical composition	Annual

AWARENESS AND TRAINING

Training and human resource development is an important link to achieve sustainable operation of the facility and environmental management.

For successful functioning of the project, relevant EMP should be communicated to the following groups of people:

Residents and Contractors

Residents must be made aware of the importance of waste segregation and disposal, water and energy conservation. This awareness can be provided through leaflets and periodic housing society meetings. They should be informed of their responsibilities for successful operation of various environmental management schemes inside the premises.

Site Staff

Relevant personnel at site must be trained for the following:

- Collection, transport, treatment and disposal solid and hazardous waste
- Operation and maintenance of Sewage Treatment Plant and reclamation system
- Operation and maintenance of LPG storage and piping system
- Requirements of the Disaster Management Plan in case of an emergency.
- Techniques for waste minimization, water conservation and energy conservation.
- Applicable environmental, health and safety regulations and compliance requirements for the same.
- Functioning of the Environmental Management System including environmental monitoring, reporting and documentation needs.

RECORD KEEPING AND REPORTING

Record keeping and reporting of performance is an important management tool for ensuring sustainable operation of the township. Records should be maintained for regulatory, monitoring and operational issues. Typical record keeping requirements for the Xion is summarized in **Table 1.4**.

TABLE 1.4: RECORD KEEPING REQUIREMENTS

Parameter	Particulars
Solid Waste Handling and Disposal	• Daily quantity of waste received • Daily quantity treated and recycled • Daily quantity sent for landfill
Biomedical and Hazardous Wastes	• Quantity of waste generated • Quantity of wastes sent out for treatment/disposal. • Waste manifests as per regulations
Sewage Treatment	• Daily quantity of raw and treated sewage • Quantity and point of usage of treated wastewater • Treated wastewater quality
Regulatory Licenses (Environmental)	• Environmental Permits / Consents from MPCB / MoEF • Copy of Waste manifests as per requirement
Monitoring and Survey	• Records of all monitoring carried out as per the finalized monitoring protocol.
Accident reporting	• Date and time of the accident • Sequence of events leading to accident • Name of hazardous waste involved in the accident • Chemical datasheet assessing effect of accident on health and environment • Emergency measure taken • Step to prevent recurrence of such events
Other	• Log book of compliance • Employee environmental, health and safety records • Equipment inspection and calibration records, where applicable • Vehicle maintenance and inspection records

ENVIRONMENTAL AUDITS AND CORRECTIVE ACTION PLANS

To assess whether the implemented EMP is adequate, periodic environmental audits will be conducted by the PSC Pacific These audits will be followed by Corrective Action Plans (CAP) to correct various issues identified during the audits.

TABLE 1.4: ENVIRONMENTAL IMPACT AND MANAGEMENT PLAN FOR THE PROJECT

ENVIRONMENTAL COMPONENTS	POTENTIAL IMPACTS	POTENTIAL SOURCE OF IMPACT	CONTROLS THROUGH EMP AND DESIGN	IMPACT EVALUATION	REMARKS
Water Sources	Ground water contamination	Construction Phase Waste water generated from Labor colony, if any provided	▪ Septic tank	No negative impact	
		Operation Phase Sewage treatment and sludge disposal on land	▪ Sewage to be treated on site in STP and reused for non potable uses. Sludge to be composted on site.	No negative impact on ground water quality envisaged. Not significant	In an unlikely event of soil and ground water contamination, remediation measures like washing of soil shall be implemented.
		Oil Contamination from underground tank storage facilities	▪ Tank Placed in a containment facility		
	Ground Water Depletion	Operation Phase Ground Water will not be used during construction as well as operation phase.	▪ Rain Water Harvesting Scheme ▪ Black and Grey water treatment and reuse ▪ Storm water collection and ▪ Awareness Campaign for reduced water use by residents.	No negative impact on ground water quantity envisaged.	
Air Quality	Dust Emissions	Construction Phase All heavy construction activities	▪ Suitable control measures will be adopted as per a dust control plan. ▪ Provision of onsite Ready Mix Concrete plant.	Not significant because dust generation will be temporary and will settle fast due to dust suppression techniques used	During construction Phase the contractors are advised to use dust masks for the employed labours. Water sprinkling for suppression of dust during construction phase.

ENVIRONMENTAL COMPONENTS	POTENTIAL IMPACTS	POTENTIAL SOURCE OF IMPACT	CONTROLS THROUGH EMP AND DESIGN	IMPACT EVALUATION	REMARKS
	Emissions of SPM, SO_2, NOx and CO	Construction Phase Operation of construction equipment and vehicles during site development.	▪ Emission control particle filters on Construction equipment ▪ Rapid on site construction and improved maintenance of equipment	Not significant after like low NOx retarder and other control equipments provided	Regular Monitoring of emissions and control measures to reduce the emission levels.
		Operation Phase Power generation through D.G Set Operations. Emissions from vehicular traffic in operations.	▪ Use of ultra low sulphur diesel and installation of NOx retarders on D.G sets. ▪ Providing separate entry and exit for pedestrians. ▪ Reduce idling time in parking space. ▪ Proper management of traffic movement in and out of parking area and at intersection with the external roads ▪ Green belt to be provided with specific species reducing SPM levels.	Not significant as D.G. set would be used only in the case of unexpected power cuts. Minor impact on the air quality of the surrounding area.	DG sets will only be used in emergency, also the DG sets provided will be as per the CPCB guidelines.

ENVIRONMENTAL COMPONENTS	POTENTIAL IMPACTS	POTENTIAL SOURCE OF IMPACT	CONTROLS THROUGH EMP AND DESIGN	IMPACT EVALUATION	REMARKS
Noise Environment	Noise emissions	Construction Phase Operation of construction equipment and vehicles during site development.	▪ Use of well-maintained equipment fitted with silencers. ▪ Providing Noise shields near the heavy construction operations ▪ High noise producing construction activity will be limited to day-time hours only. ▪ Use of Personal Protective Equipment (PPE) like ear muffs and ear plug for workers during construction activities	The construction will be carried out in a confined area and the impact of noise will not be beyond 200m from the area of activity. Also, there are no sensitive receptors located within near vicinity of site.	
		Operation Phase Noise from vehicles movement Noise from D.G. sets operations	▪ Green Belt Development and development of silence zones for traffic movement. ▪ Providing Acoustic Enclosures on D.G sets	The effect would be significant due to honking, if proper management of traffic is not practiced. There would be minor negative impact on noise. Short-term exposure within permissible limit.	

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ENVIRONMENTAL COMPONENTS	POTENTIAL IMPACTS	POTENTIAL SOURCE OF IMPACT	CONTROLS THROUGH EMP AND DESIGN	IMPACT EVALUATION	REMARKS
Land Environment	Soil contamination	Construction Phase Disposal of construction and demolition Debris	▪ Construction debris will be collected and suitably used on site as per construction waste management plan.	Impact will be minor negative, as any waste generated will be reused for construction activities.	
		Operation Phase Dumping of municipal solid waste on land.	▪ Proposed solid waste segregation and collection, segregation system. Segregated waste (biodegradable) will be treated using vermin culture on site. ▪ Awareness programs will be conducted to educate the people on reducing waste generation, reuse and recycling of waste	Since solid waste will be collected and segregated at source and further treated using vermin culture on site and recyclables material will be sold to approve vendors.	
		Waste oil handling from D.G sets	▪ Waste oil generated will be sold to authorized recyclers	Negligible impact	
Biological Environment (Flora and Fauna)	Displacement of Flora and Fauna on site	Construction Phase Site Development during construction.	▪ The species and number of trees have been identified and marked.	Most of the areas of the project site belong to fallow land, which is dominated by weeds, and there is no presence of red listed/ endangered species in the area. Thus, no significant negative impact.	--

ENVIRONMENTAL COMPONENTS	POTENTIAL IMPACTS	POTENTIAL SOURCE OF IMPACT	CONTROLS THROUGH EMP AND DESIGN	IMPACT EVALUATION	REMARKS
		Operation Phase Increase of Green Cover	▪ Suitable green belt will be developed as per landscaping plan on the site using local flora, which will enhance the ecology. ▪ As a part of development, 7410Sq.m. area will be devoted for dense landscape, 2475Sq.m as hardscape area and 2293Sq.m. for lawns and planters.	The project will have a positive impact	
Socio-Economic Environment	Population displacement	Construction Phase Construction Activities leading to relocation	▪ The plot is vacant, hence no population displacement	No negative impact	
		Operation Phase Site operation	▪ Project will provide employment opportunities to the local people in terms of labor during construction and service personnel during operations	Minor positive Impact	--
Traffic Pattern	Increase of Vehicular traffic	Construction Phase Heavy Vehicular movement during construction	▪ Heavy Vehicular movement will be restricted to day time only and adequate parking area is available inside the site	No Negative Impact	--

ENVIRONMENTAL COMPONENTS	POTENTIAL IMPACTS	POTENTIAL SOURCE OF IMPACT	CONTROLS THROUGH EMP AND DESIGN	IMPACT EVALUATION	REMARKS
		Operation Phase Traffic due to residents and commercial activities once the site is operational.	▪ Vehicular movement will be regulated inside the site with adequate roads, access and exit points and parking lots in the site. ▪ Signals for traffic movement and anti honking will be placed in the parking area.	With mitigative measures Minor negative Impact will occur	The incremental traffic load due to project operation is not expected to cause any significant impact in the existing traffic pattern.

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As per EIA Notification 2006

No. 21-777...../2007.....-IA.III

Comprehensive Check Memo indicating time taken for Environmental clearance

S. No.	Activity	Date
1.	Received in the MoEF	26.7.2007
2.	Examination done in Ministry of Environment and Forests	8.8.2007
3.	Clarification/ additional information sought	—
4.	Information received from project proponent	—
5.	Public Hearing conducted	—
6.	NOC received from SPCB	—
7.	Placed before Expert Committee	Nov 22-24, 2007
8.	Specific clarification/information as sought by the Expert Committee / Ministry	No, Minutes of EAC placed at F1A
9.	Information received from Project Proponent	—
10.	Submitted by Research Officer for orders	—
11.	Submitted by Additional Director for orders	20-2-08

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12.	Submitted for orders by Director	
13.	Submitted for orders by JS	
14.	Submitted for orders by AS/SS	
15.	Submitted for orders by Secretary.	

Foot Note:

1. The proposal was received prior to/after EIA Notification of 14th September, 2006 (as the case may be) and was processed for consideration for grant fo environmental clearance as per procedure in EIA Notification, 1994 in terms of provisions of Para 12 of EIA Notification, 2006 dated 14.9.2006 read with para 2.2.2 of the Circular dated 13.10.2006.
2. The Proposal is of "B1/B2" category and has been considered by the Expert Appraisal Committee as Central level as the SEAC has not been constituted for the State (Tick "B1/B2" whatsoever is applicable).
3. The proposal was of "B" category, however, the same has been debit as "A" Category project because of _____ (give appropriate reasons)

****

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By Speed Post

F.No. 21-777/2007-IA.III
Government of India
Ministry of Environment and Forests
(I.A. division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110510

Dated: 04.03.2008

To,

M/s PSC Pacific,
PSC House, CTS No.111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune 411004
Maharashtra

Subject: Environmental Clearance for proposed construction of commercial complex "Xion"- mixed use development at Hingewadi, Pune, Maharashtra.

Dear Sir,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. Form 1 & 1 A, and Conceptual Plan and the additional clarifications furnished in response to the observations of the Additional Expert Appraisal Committee constituted by the competent authority in its 24th meeting held on Nobermber 22-24, 2007.

2. The project proponent is proposing for construction of commercial complex "Xion"- mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hingewadi, Pune, Maharashta at a cost of Rs. 75 crore. The proposed project comprises construction of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq. m. The total built up area as indicated is 46,040.96 sq. m. Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu. m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste water will be disposed of in public sewer. The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504.

3. The EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the EMP and other stipulated conditions. Accordingly, the Ministry hereby accords necessary environmental clearance for the project under category 8 (a) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

PART A- SPECIFIC CONDITIONS

I. Construction Phase

i. Vehicles hired for construction activities should be operated only during non-peak hours.

ii. All the top soil excavated during construction activities should be stored for use in horticulture/landscape developments within the project site.

iii. Ready mixed concrete shall be used in building construction.

iv. Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.

v. Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction/operation of the project.

vi. Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

vii. Use of glass may be reduced upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.

viii. Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.

ix. Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air

conditioned spaces by use of appropriate thermal insulation to fulfill requirement.

x. Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.

xi. All required sanitary and hygienic measures including portable toilets/septic tank etc. for labour should be in place before starting construction activities and to be maintained throughout the construction phase.

xii. Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.

xiii. A First Aid Room will be provided at the project site both during construction and operation of the project.

xiv. Adequate drinking water facility should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.

xv. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and be disposed off taking the necessary precautions for general safety and health aspects of people.

xvi. Diesel power generating sets used during construction phase should be of "enclosed type" to prevent noise and should conform to rules made under Environment (Protection) Act 1986, prescribed for air and noise emission standards.

xvii. Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.

xviii. The construction agencies shall use flyash based material/ products as per the provisions of fly ash notification of 14.9.1999 and as amended on 27.8.2003.

xix. Vehicles hired for bringing construction material at site should be in good condition and should have valid "pollution under check"(PUC) certificate and to conform to applicable air and noise emission standards and should be operated only during non-peaking hours.

xx. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they should not leach into the ground water.

xxi. Any hazardous waste generated during construction phase should be disposed of as per applicable Rules & norms with necessary approvals of the State Pollution Control Board.

xxii. Under the provisions of the Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it was found that construction of the project had started without obtaining environmental clearance.

xxiii. The diesel required for operating DG Set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosives shall be taken.

xxiv. The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act from the Competent Authority shall be taken.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.

II. Operation Phase

The environmental clearance recommended to the project is subject to the specific conditions as follows:

i. Diesel power generating sets proposed as source of back up power for lifts, common area illumination and for domestic use should be of "enclosed type" and conform to rules made under The Environment (Protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.

ii. Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex.

iii. Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.

iv. The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-cycled to the maximum extent possible. In case treated effluent is to be discharged separately during monsoon period consent of State Pollution Control Board shall be taken.

v. Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.

vi. For disinfection of waste water ultra violet radiation shall be used in place of chlorination.

vii. Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.

viii. The solid waste generated should be properly collected & segregated. Wet garbage (biodegradable) should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.

ix. The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.

x. The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.

xi. A Report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the Ministry in three months time.
xii. The values of R & U for the building envelope should meet the requirements of the hot & humid climatic location. Details of the building envelope should be worked out and furnished in three months time.
xiii. Energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoid Mercury contamination. Use of solar panels may be done to the extent possible.
xiv. The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the premises.
xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.

PART – B. GENERAL CONDITIONS

i) The environmental safeguards contained in the documents should be implemented in letter and spirit.
ii) Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.
iii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

4. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

7. Necessary permission shall be obtained from the State Fire Department for providing fire safety mea occupying/ handing over the premises to the owners/ allotees. If any forest land is involved in the p clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.

8. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

9. The project proponent shall enter in to MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Secretary, Department of Environment, Government of Maharashtra, New Administrative Building, 15th Floor, Opp. Mantralaya, Mumbai.
2. The Member Secretary, Maharashtra State Pollution Control Board, Kalptaru Point, 3rd Floor, Near Sion Circle Opp. Cine Planet Cinema, Sion(E), Mumbai.
3. The CCF, Regional Office, Ministry of Envi ronment & Forests, Bhopal.
4. IA - Division, MOEF, New Delhi - 110001.
5. Guard file.

(K.C. RATHORE)
Additional Director (IA)

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Corporate Office : PSC House, CTS No. 111+111/2 Anand Colony,
Off Prabhat Road, Dr. Ketkar Road, Erandavane, Pune - 411 004.
▪ Tel.: 91-20-30223344, 25440986, 25462128 ▪ Fax : 91-20-25460986
▪ E-mail : info@pscl.in ▪ Visit us at : www.pscl.in

PSC PROPERTIES

19th November, 2017

To,
The Director
Regional Office (West Central Zone),
Ministry of Environment, Forest and Climate Change,
Ground Floor, East wing,
New Secretariat Building,
Civil lane, Nagpur-440001

Subject: **Half-yearly Compliance Report: June to November 2017**

Project: **Residential project "Xion" at Hinjewadi, District Pune by PSC PACIFIC.**

EC No. **F. No. 21-777/2007-IA.III, dated 4th March, 2008**

Dear Sir,

We are submitting half-yearly Compliance Report (hard & soft copy) in respect of the stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,
Yours faithfully,
FOR PARANJAPE SCHEMES (CONSTRUCTION) LIMITED.

Nidhi Deshpande
PROJECT PROPONENT

Enclosure:
1. A hard copy of the compliance and monitoring report
2. A CD containing the same report

CC copy to:
1. Regional officer, Maharashtra Pollution Control Board, SRO - Pimpri Chinchwad
2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

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ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

for the period of

(June, 2017 to November, 2017)

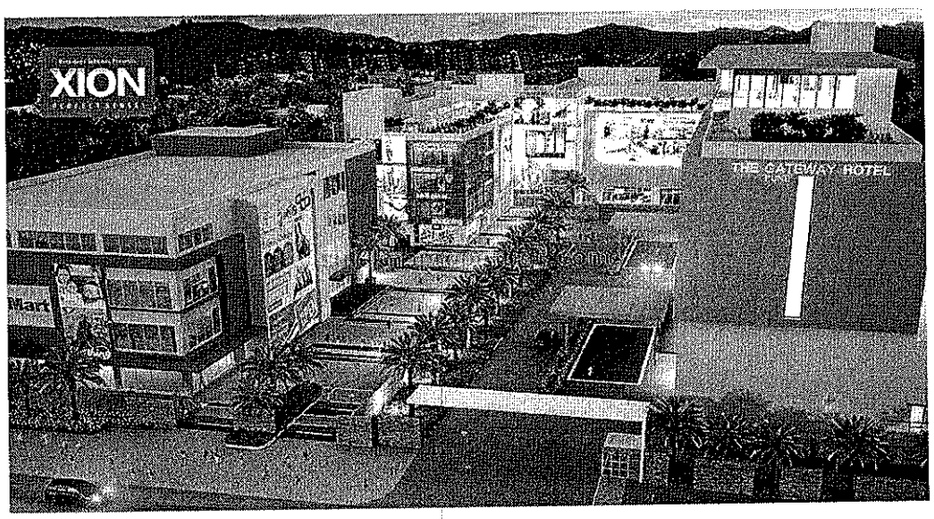
for

Mixed Use Development Project "Xion"

PSC Pacific.

Hinjwadi

(Environmental Clearance Letter no. 21-777/2007-IA.III dated 4th March, 2008)



Proposed by

Paranjape Schemes (Construction) Ltd

CONSULTANT

MahabalEnviro Engineers Pvt. Ltd.
Plot F-7, Road 21, MIDC Wagle Estate, Thane-400604
Phone: +91-22-25823139/1663/0658 thane@mahabal.com

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Environmental Clearance

F.No. 21-777/2007-IA.III

Government of India

Ministry of Environment and Forests

(I.A. Division)

Paryavaran Bhavan,
CGO Complex, Lodhi Road
New Delhi 11051

Dated: 04.03.2008

To,
PSC pacific,
PSC House, CTS No. 111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune- 411004
Maharashtra

Subject: **Environmental clearance for proposed Construction of complex Xion-mixed use development at Hinjewadi Pune, Maharashtra.**

Dear Sir,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. the form 1, Form 1A and conceptual plan and the additional clarifications furnished in response to the Observations of the Additional Expert Appraisal Committee constituted by the competent authority in its 24th meeting held on November 22-24, 2007.

2. The project proponent is proposing for construction of commercial complex "Xion"-mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune, Maharashtra at a cost of Rs. 75 crore. The proposed project comprises of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq.m. The total built up area as indicted is 46,040.96 sq.m. Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu.m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste water will be disposed of in public sewer. The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504.

3. The additional EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject EMP and other stipulated conditions. Accordingly the Ministry hereby accords necessary environmental clearance for the project under category 8(a) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

Environmental Clearance Condition
Letter no.F.No. 21-777/2007-IA.III dated 04.03.08.

Sr.	Conditions	Compliance	Annex	Photo
	Part A: SPECIFIC CONDITIONS			
1.	**Construction Phase**			
i)	Vehicles hired for construction activities should be operated only during non-peak hours.	We have complied with the condition.		
ii)	All the top soil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.	The top soil generated during construction phase is reused for landscape development.		
iii)	Ready mixed concrete shall be used in building construction.	We have complied with the condition.		
iv)	Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.	We have complied with the condition.		
v)	Permission to draw ground water shall be obtained from competent authority prior to construction/ operation of project.	Not Applicable		
vi)	Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	We have complied with the condition.		
vii)	Use of glass may be reduced up to 40% the electricity consumption and load on air conditioning. If necessary use high quality double glass with special reflective coating in windows.	We have complied with the condition.		
viii)	Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.	We have complied with the condition.		

Sr.	Conditions	Compliance	Annex	Photo
ix)	Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.	We have complied with the condition.		
x)	Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.	We are complying with the condition.		
xi)	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.	We are complying with the condition.		
xii)	Soil and ground water samples will be tested to as certain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	Soil sample from the project site has been tested as per the BS: 10500. Monitoring report for the period June, 2017 to November, 2017 is provided.	√	
xiii)	A first aid room will be provided at the Project both during construction and operation of the Project.	We have provided first aid facility which will be providing essential medical assistance to the workers in case of accidents during construction phase.		√
xiv)	Adequate drinking water and sanitary facilities should be provided for construction at site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	We have complied with the condition.		
xv)	Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and disposed off taking the necessary precautions for general safety and health aspects of people.	We have complied with the condition. Disposal of muck including excavated material is properly disposed taking necessary precautions.		

Sr.	Conditions	Compliance	Annex	Photo
xvi)	Diesel power generating sets used during construction phase should be of ''enclosed type '' to prevent noise and should conform to rules made under Environment (protection) act 1986, prescribed for air and noise emission standards.	DG is enclosed type and conforms to rules made under Environment (protection) act 1986, prescribed for air and noise emission standards.		√
xvii)	Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.	The Noise Level as well as air pollution is Monitored regularly from MoEF recognized laboratory. Monitoring reports for the period of June 2017 to November, 2017 are provided.	√	
xviii)	The construction agencies shall use fly ash based material/products as per the provisions of fly ash notification of 14.09.1999 and as amended on 27.08.2003.	We have complied with the condition.		
xix)	Vehicles hired for bringing construction material at site should be in good condition and should have valid "pollution under check" (PUC) certificate & to conform to applicable air and noise emission standards and should be operated only during non peaking hours.	We have complied with the condition.		
xx)	Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	Construction spoils does not contain bituminous material. No Hazardous materials are used at the site. Utmost care is taken to prevent the contamination of water sources if present nearby.		
xxi)	Any hazardous waste generated during construction phase should be disposed of as per applicable rules and norm with necessary approvals of the Maharashtra State Pollution Control Board.	Not Applicable		

Sr.	Conditions	Compliance	Annex	Photo
xxii)	Under the provisions of Environment (protection) Act 1986, legal action shall be initiated against the project proponent, if it was found that construction of the project had started without obtaining Environmental clearance.	Construction is started after obtaining Environment Clearance. Dated on 04.03.2008. Vide. Copy of Environment Clearance is attached.	✓	
xxiii)	The diesel required for operating DG set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosive shall be taken.	Diesel is not stored at the site.		
xxiv)	The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of firefighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act from the Competent Authority shall be taken.	Being complied with		
xxv)	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.	EHS team is responsible for day to day monitoring and EMP implementation at site.		
	II. Operation Phase			
	The environmental clearance recommended to the project is subject to the specific conditions as follows:			
i	Diesel power Generating sets as source of back up power for lifts and common area illumination should be of "enclosed type" and conform to Rules made under Environmental (protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.	Being complied with		✓

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Sr.	Conditions	Compliance	Annex	Photo
ii	Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex.	The noise Level as well as air pollution will be Monitored regularly from MoEF recognized laboratory. Monitoring reports for the period of June, 2017 to November, 2017 are provided.	√	
iii	Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment's area during the monsoon period.	Being complied with		
iv	The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-cycled to the maximum extent possible. In case treated effluent is to be discharged separately during monsoon period consent of state Pollution Control Board shall be taken	The sewage is being treated to tertiary level confirming to MPCB standards and is being reused for gardening and flushing purposes.		
v	Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.	Being complied with.		
vi	For disinfection of waste water ultra violet radiation shall be used in place of chlorination.	Being complied with. For disinfection of waste water we use ultra violet radiations in place of chlorination.		
vii	Rainwater harvesting and ground water recharging shall be practiced. Oil & grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.	We have provided recharge pits for rainwater harvesting within project area.		

Sr.	Conditions	Compliance	Annex	Photo
viii	The solid waste generated should be properly collected, segregated. Wet garbage should be composted & dry/ inert solid waste should be disposed off to approve sites for land filling after recovering recyclable material.	We are complying with the condition. Wet garbage is being composted and Recyclable waste in being sold to recycler.		
ix	The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.	Yes, we are complying with the condition. Green belt is developed around the periphery of the plot.		
x	The ground water levels and its quality should be monitored regularly in consultation with central water authority.	Ground water is not drawn at the site. Ground water monitoring report is attached herewith.		
xi	A report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U factors etc. and submitted to the ministry in three months' time.	Being complied with.		
xii	The values of R & U for the Commercial building envelops should meet requirements of the hot & humid climatic location. Details of the building envelopes should be worked out and furnished in three months' time.	Being complied with. The Building envelops are designed in such a way that they meet all requirements of hot & humid location.		

Sr.	Conditions	Compliance	Annex	Photo
xiii	Energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoid Mercury contamination. Use of Solar panels may be done to h extent possible.	Being complied with.		
xiv	The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the premises.	We have complied with the condition.		
xv	Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.	We have complied with the condition.		
Part B: General conditions				
i)	The environmental safeguards contained in the documents should be implemented in letter and spirit.	We agree with the condition.		
ii)	Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.	During construction phase labours are paid to purchase cooking fuels and materials.		
iii)	6 monthly monitoring reports should be submitted to the Ministry and its regional office.	6 monthly monitoring reports are being sent regularly. Monitoring reports for the period of June, 2017 to November, 2017 are attached.	√	

Sr.	Conditions	Compliance	Annex	Photo
4.	Officials from the regional office of MoEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MoEF, Bhopal.	Full cooperation and all possible support, information will be provided to Ministry officials along with all the documents.		
5.	In the case of any change(s) in the project, the project would require a fresh appraisal by this Ministry.	We agree with the condition.		
6.	The Ministry reserves the right to additional safeguard measures subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.	We agree with the condition.		
7.	Necessary permission shall be obtained shall be obtained from the State Fire Department for providing fire safety measures before occupying over the premises to the owners/allotees. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.	We agree with the condition.		
8.	These stipulations would be enforced among others under the provision of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.	We agree with the condition.		

Sr.	Conditions	Compliance	Annex	Photo
9.	The Project proponent shall enter into MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.	Being complied with.		

Compliance report "Xion" project at Hinjewadi, Pune

Consent to Establish

Infrastructure Project/LSI

Consent No. BO/RO (P&P)/EIC No. PN-2305/08/E/CC-338

Date: 01/08/2008

Consent to establish is granted to **Xion, CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1,17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune-411057**

Located in the area declared under the provision of water Act (P&CP) 1974, Air Act (P&CP), 1981 and Authorization under the provision of H.W (M & H) Rules and amendments thereto subject to the provisions of the Acts and the Rules and the orders that may be made further and subjected to the following terms and conditions:

1. **The consent to establish is valid up to commissioning of the Project.**

For development of land/plot as new construction activities involves development of commercial complex comprising of Mall & Multiplex, Hotel &Achor shop named as M/s. Xion, CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1,17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune-41105. On total plot area of 31,451 Sq. Mtrs. & total built up area of 46,040.96 Sq.Mtrs. including utilities and services such as per construction commencement certificate issued by local body.

Condition of Consent

Sr.	Condition	Compliance	Annex	photo
2.	**Conditions under Water (P&CP) Act, 1974 for discharge of effluent:**			
	1.Thequantity of sewage effluent rom above construction project shall not exceed 251.0 m^3/Day **2.Sewage Effluent treatment**: The applicant shall provide a comprehensive sewage treatment plant as is warranted with reference to influent quality and corresponding mode of disposal and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards: Suspended solid — Not to exceed — 100 — mg/l BOD 3 degree 27 cc — Not to exceed — 100 — mg/l **3. Sewage effluent disposal:** The treated domestic effluent shall be 100% recycled and reused for flushing, fire fighting & cooling of Air conditions. In no case, effluent shall find its way to river Mula directly/indirectly at any time. The project authorities should apt environmental friendly technologies like ozonation, UV treatment etc. by replacing chlorination. As the distance of the project site from river Mula is 1.5 Km and located in A-II class, laundry & swimming pool activity are not permitted.	Effluent is recycled and reused for Flushing and gardening purposes.		
	i. Non-hazardous solid waste: The total quantity shall not exceed 670 kg per day and shall be segregated and treated as follows: Sr. | Type of segregated solid waste | Quantity MT/day | Treatment (After Segregation)	Solid waste generated onsite is segregated and disposed off as per the rules. Organic waste is treated in OWC and converted in manure. Recyclable waste is being sold to recycler.		✓

Sr.	Condition	Compliance	Annex	photo
	1 Total organic solid waste 670 -			
3.	**Other conditions**			
1.	All activities shall be in resonance with the provisions of Indian Forest Act, 1927(16 of 1927), forest conservation Act, 1980 (69 of 1980) and wildlife (Protection) Act, 1972 (53 of 1972), and special notification published for area wherever applicable and all the Environmental Statutes and Instruments.	We agree with the condition.		
2.	This consent to establish is issued for only New Construction/Developing construction project purposes.	We agree with the condition		
3.	No quarrying activities shall be commenced in the area unless appropriate permissions are obtained for a limited quarrying material required for construction of local residential housing and traditional road maintenance work, provided that such quarrying is not done on Forest land and the material is not exported to the outside area.	We agree with the condition		
4.	There shall be no felling of trees whether on forest, Government, Revenue or Private lands except as per prevailing Rules.	We agree with the condition.		
5.	Extraction of ground water for the project shall require prior permission of the state ground water authority or other relevant authorities, as applicable	Ground water is not drawn at the site.		
6.	Near the activities that are related to water (Like activities of water parks, water sports) and/or in the vicinity of lake, Dissolved oxygen shall not be 5mg/liter.	Not applicable.		

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Sr.	Condition	Compliance	Annex	photo
7.	In order to ensure that the water from this project do not enter into outside environment, the nallas crossing the township/complex premises, shall be lined, covered and made water tight by the applicant within the premises with intermittent inspection of chambers following good engineering practices as per the regulations of the local body.	Being complied with.		
8.	The applicant shall prepare management plan for water harvesting, roof-water reclamation, water/storm water conservation and implement the same before handling over of complex for occupation.	being complied with.		
9.	Applicant shall provide fixtures of showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	being complied with.		
10.	The applicant shall draw plans for the segregation of solid waste into biodegradable and Non-biodegradable components. The biodegradable material shall be recycled through scientific in-house composting (i.e. vermicomposting facility within premises) with the approval of local body. The proper demarked area shall be identified for collection & storage of MSW properly, which shall be finally disposed off at approved Municipal Solid Waste landfill site of local body environmentally acceptable location and method. It is clarified that the term solid waste include domestic, commercial, and garden waste but does not include hazardous and biomedical waste. The Activities of Bio-composting and engineered land fill shall be as per the municipal solid waste (M&H) Rules 2000.	Being complied with.		
11.	Applicant shall be responsible to take adequate precautionary measures as details in this consent.	We agree with the condition.		
12.	The applicant/generator shall be	Not Applicable.		

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td></td><td>responsible for safe and scientific collection, transportation, treatment and disposal of Bio-Medical waste as per the provisions made under the Bio-Medical Waste (Management & Handling) Rules, 1998. Any activity as defined under BMW (M&H) Rules has to Obtain a separate Authorization from Maharashtra Pollution Control Board.</td><td></td><td></td><td></td></tr>
<tr><td>13</td><td>For disinfection of waste water ultra violet radiation shall be used in place of chlorination.</td><td>We have complied with the condition</td><td></td><td></td></tr>
<tr><td>14.</td><td>Vehicles hired for construction activities should be operated only during non-peak hours.</td><td>Yes, we have complied with the condition.</td><td></td><td></td></tr>
<tr><td>15.</td><td>Ready mixed concrete used in building construction should apply separately for consent from the board.</td><td>We have outsourced Ready mix concrete.</td><td></td><td></td></tr>
<tr><td>16.</td><td>The applicant during the construction stage shall provide:
a) Septic tank and soak pit of adequate capacity for the domestic effluent generated due to workers residing at site.
b) Proper loading and unloading of construction material, excavated material and its proper disposal as per MSW (M&H) rules 2000.
c) Cutting of trees is not permitted, however in unavoidable conditions necessary permission from the local body shall be obtained.
d) Green belt of 33% of the open space shall be developed.</td><td>We are complying with the condition.</td><td></td><td></td></tr>
<tr><td>4.</td><td>The applicant shall comply with all the provision of, the water (Prevention and control of pollution) Cess Act, 1977 (to be referred as Cess Act) and Rules as Amended, 2003 and Rules there under:
The daily water consumption for the following categories shall not exceed, as under
<table>
<tr><td>Domestic</td><td>From ULB(In CMD)</td><td>From other sources(In CMD)</td></tr>
<tr><td>Domestic</td><td>381</td><td>NA</td></tr>
<tr><td>Make up water for swimming pool</td><td>NA</td><td>NA</td></tr>
<tr><td>Make up for fire fighting</td><td>NA</td><td>NA</td></tr>
</table></td><td>We are complying with the condition.</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td></td><td>
<table>
<tr><td>Agriculture/Garden ing</td><td>NA</td><td>NA</td></tr>
</table>
</td><td></td><td></td><td></td></tr>
<tr><td>5.</td><td><u>Terms & conditions for compliance of Air (prevention & Control of Pollution) Act, 1981:</u></td><td></td><td></td><td></td></tr>
<tr><td></td><td>The applicant may install 05 nos. diesel generating sets (DG Sets) of capacity (04x750 KVA) and (1x385 KVA) and shall be equipped with comprehensive control system as is warranted with reference to generations of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards.
Standards for the emission of air Pollutants
i)
<table>
<tr><td>1</td><td>SPM/TPM</td><td>Not to Exceed</td><td>150</td><td>mg/Nm^3</td></tr>
<tr><td>2</td><td>SO_2</td><td>Not to Exceed</td><td>72</td><td>kg/day</td></tr>
</table>
ii)The following measure shall be taken
a) Adequate mitigation measures shall be taken to control emission of SO_2, NO_x, SPM, RSPM.
b) Applicant shall achieve following Ambient Air Quality standards.
<table>
<tr><td rowspan="2">1</td><td rowspan="2">SPM</td><td>Exceed (Annual Average)</td><td>140</td><td>µg/m^3</td></tr>
<tr><td>Exceed (24 hours)</td><td>200</td><td>µg/m^3</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">SO_2</td><td>Exceed (Annual Average)</td><td>60</td><td>µg/m^3</td></tr>
<tr><td>Exceed (24 hours)</td><td>80</td><td>µg/m^3</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">NO_x</td><td>Exceed (Annual Average)</td><td>60</td><td>µg/m^3</td></tr>
<tr><td>Exceed (24 hours)</td><td>80</td><td>µg/m^3</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">RSPM</td><td>Exceed (Annual Average)</td><td>60</td><td>µg/m^3</td></tr>
<tr><td>Exceed (24</td><td>100</td><td>µg/m^3</td></tr>
</table>
</td><td>We have complied with the condition.</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td></td><td>hours)
iii) The Applicant shall observe the following fuel patterns
<table>
<tr><td>No.</td><td>Type of Fuel</td><td>quantity</td></tr>
<tr><td>1</td><td>HSD</td><td>3600.0 Kg/Day</td></tr>
</table>
iv) The applicant shall erect the Chimney(s) of the following specifications
<table>
<tr><th>No.</th><th>Chimney attached to DG</th><th>Height above roof</th></tr>
<tr><td>1</td><td>DG set 04x750KVA</td><td>5.5* mtrs roof</td></tr>
<tr><td>2</td><td>DG Set 01x385KVA</td><td>4.0* mtrs</td></tr>
</table></td><td></td><td></td><td></td></tr>
<tr><td>v)</td><td>Conditions for D.G. Set
1. Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
2. Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room shall be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) shall also be provided. The measurement of insertion loss shall be done at different points at 0.5 meters from acoustic enclosure room and then average
3. The applicant should make efforts to bring down noise level due to DG set, outside the premises, with ambient noise level requirements by proper setting and control measures.
4. Installation of DG set must be strictly in compliance with recommendations of DG Set manufacturer.
5. A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG</td><td>Being complied with.</td><td></td><td></td></tr>
</table>

Sr.	Condition	Compliance	Annex	photo
	manufacturer which would help to prevent noise levels of DG set from deteriorating with use. 6. The DG set shall be operated only in case of power failure. The applicant shall make arrangement for regular electrical power 7. The applicant shall not cause any nuisance in the surrounding area due to operation of D.G. Set. 8. In case of problems, the DG set shall not be operated until it is set back to satisfactory position.			
vi)	**Other Conditions:**			
	a.) The applicant shall provide ports in the chimney and facilities such as ladder, platform etc. for monitoring the air emission and the same shall be open for inspection to/and for use of the Board's staff. The chimneys shall be numbered as S-1, S-2 etc and these shall be painted/displayed the facilitate identification. b.) Water spraying shall be done on ground to avoid fugitive emission. c.) Construction material shall be carried in enclosed vehicle during construction activities.	Being complied with.		
vii)	**Conditions for Utilities like Kitchen, Eating Places etc.**			
1)	The kitchen shall be provided with the exhaust system chimney with Oil catcher connected to chimney through ducting.	Being complied with		
2)	The toilet should be provided with the exhaust system connected to chimney through ducting	Being complied with		
3)	The air conditioner shall be vibration proof and the noise shall not exceed 68 dB (A)	Being complied with		
4)	The exhaust hot air from A.C shall be attached to chimney at least 5 mtrs higher than the nearest tallest building through ducting and shall discharge into open air in such a way that no nuisance is caused to	We agree with the conditions.		

Sr.	Condition	Compliance	Annex	photo
	neighbors.			
viii)	The applicant shall take adequate measures for control of noise levels from its own sources within the complex (residential cum commercial) in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Day time is reckoned as between 6 a.m. to 10 P.m. and night time is reckoned between 10 p.m. to 6 a.m.	being complied with		
ix)	Construction equipment generating noise of less than 65/90 db(A) are permitted.	We have complied with the condition.		
x)	No construction work is permitted during night time.	We have complied with the condition.		
6)	**CONDITIONS UNDER HW(M&H) & AMENDMENT RULES 2003**			
	The applicant shall not generate or handle any hazardous waste	being complied with.		
7)	The applicant shall certify that the bricks used in construction are manufactured using the ash from Thermal power stations if it is within a radius of 100 km from Thermal Power Plant and submit the names of bricks manufacturer.	being complied with.		
8)	The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.	Application has been submitted for consent to operate.		
9)	The applicant shall adopt environmental friendly technology in development of the project.	being complied with.		
10)	The applicant shall take the proper remediation measures to ensure that the ground water and soil contamination is prevented and follow due diligence at the construction stage.	being complied with.		
11)	The applicant shall use fly ash based material/products as per the provision of fly ash Notification of 14.09.1999 and as amended on 27.08.2003	Yes, We have complied with the condition.		
12)	Energy conservation measures like installation solar panel for lighting the area outside the building should be integrated part of the project design.	Not applicable		
13)	The applicant shall comply with the conditions stipulated in Environmental Clearance granted by MoEF, GOI vide No. 21-777/2007-IA,III dtd.4th March, 2007.	We are complying with the conditions.		

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Sr.	Condition	Compliance	Annex	photo
14)	This Board reserves the right to amend or add any conditions in this consent and the same shall be binding on the Applicant.	We agree with the condition		
15)	This consent is issued pursuant to the decision of Consent Committee meeting held on 10.06.2008.	We agree with the condition		
16)	The capital investment of the project is Rs. 150/-crores.	We agree with condition.		

Fee Details:
Received consent fee of:

Amount	DD No	Date	Drawn on
Rs.1,50,000/-	061491	22.02.2008	Axis Bank

1) Copy to:
2) Regional Officer, MPCB Board, Pune
3) Sub Regional Officer, MPCB, Pune.
4) Chief Accounts Officer, MPCB Board, Mumbai.
5) Cess Branch, MPCB, Mumbai.
6) Master file.

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Annexure I
Previous Compliance Report Submitted Copy
(As per EC Condition :)

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Corporate Office : PSC House, CTS No. 111+111/2 Anand Colony,
Off Prabhat Road, Dr. Ketkar Road, Erandavane, Pune - 411 004.
• Tel.: 91-20-30223344, 25440986, 25462128 • Fax : 91-20-25460986
• E-mail : info@psci.in • Visit us at : www.psci.in

PSC PROPERTIES

14th July, 2017

To,
The Director
Regional Office (West Central Zone),
Ministry of Environment, Forest and Climate Change,
Ground Floor, East wing,
New Secretariat Building,
Civil lane, Nagpur-440001

Subject: **Half-yearly Compliance Report: December to May 2017**

Project: **Residential project "Xion" at Hinjewadi, District Pune by PSC PACIFIC.**

EC No. **F. No. 21-777/2007-IA.III, dated 4th March, 2008**

Dear Sir,

We are submitting half-yearly Compliance Report (hard & soft copy) in respect of the stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,
Yours faithfully,
FOR PARANJAPE SCHEMES (CONSTRUCTION) LIMITED.

Paranjape Schemes (Construction) Ltd.

Nidhi Deshpande
PROJECT PROPONENT

Enclosure:
1. A hard copy of the compliance and monitoring report
2. A CD containing the same report

CC copy to:
1. Regional officer, Maharashtra Pollution Control Board, SRO - Pimpri Chinchwad
2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

वन एवं जलवायु परिवर्तन मंत्रालय
Environment, Forest & Climate Change
क्षेत्रीय कार्यालय (पश्चिम मध्य क्षेत्र)
Office (Western Central Zone)
भूतल खंड / Ground Floor, East Wing
सिविल लाईन्स / Civil Lines
Nagpur-440 001

17/7

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3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

अधिक लिपिक
पर्यावरण विभाग
मंत्रालय, मुंबई-३२.

Maharashtra Pollution Control Board
Kalpataru Point, 2/3/4th Floor,
Sion Matunga Scheme, Road No. 8,
Opp. Sion Circle, Sion (East),
MUMBAI - 400 022
Phone : 24010437 / 24020781

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Ministry of Environment, Forest and Climate Change,
Ground Floor, East wing,
New Secretariat Building,
Civil lane, Nagpur-440001

Subject: **Half-yearly Compliance Report: December to May 2017**

Project: **Residential project "Xion" at Hinjewadi, District Pune by PSC PACIFIC.**

EC No. **F. No. 21-777/2007-IA.III, dated 4th March, 2008**

Dear Sir,

We are submitting half-yearly Compliance Report (hard & soft copy) in respect of the stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,
Yours faithfully,
FOR PARANJAPE SCHEMES (CONSTRUCTION) LIMITED.

Paranjape Schemes (Construction) Ltd.

Nidhi Deshpande
PROJECT PROPONENT

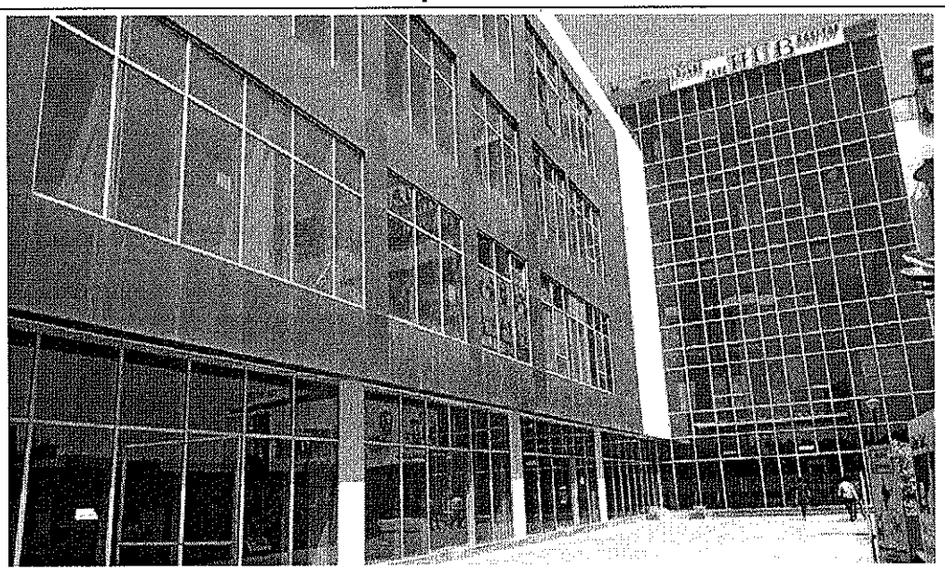
Enclosure:
1. A hard copy of the compliance and monitoring report
2. A CD containing the same report

CC copy to:
1. Regional officer, Maharashtra Pollution Control Board, SRO - Pimpri Chinchwad
2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

Received
15/07/17
Sr. Clerk
Regional Office
M.P.C.B. Pune.

Annexure II
Site Photographs
(As per EC Condition: B(ii), xiii, xiv)

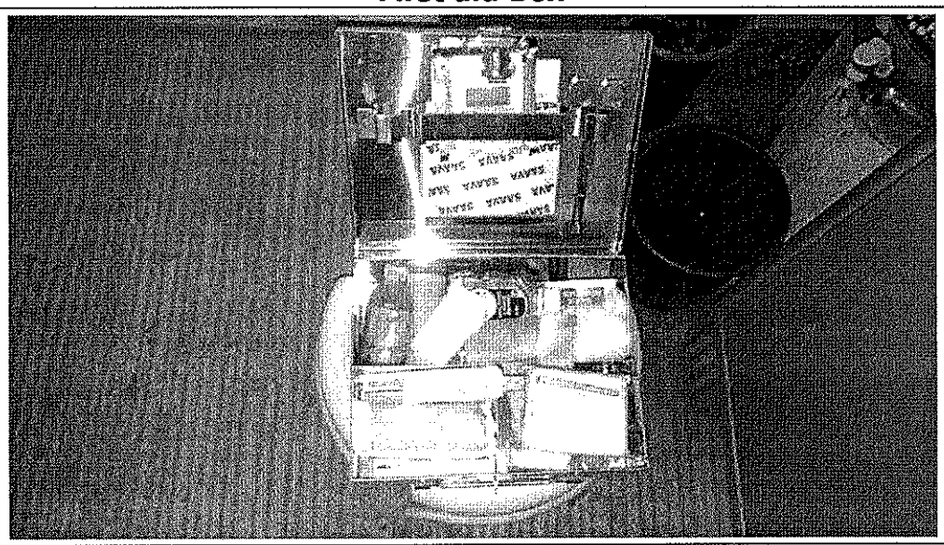
Completed Mall



Completed Theater



First aid Box

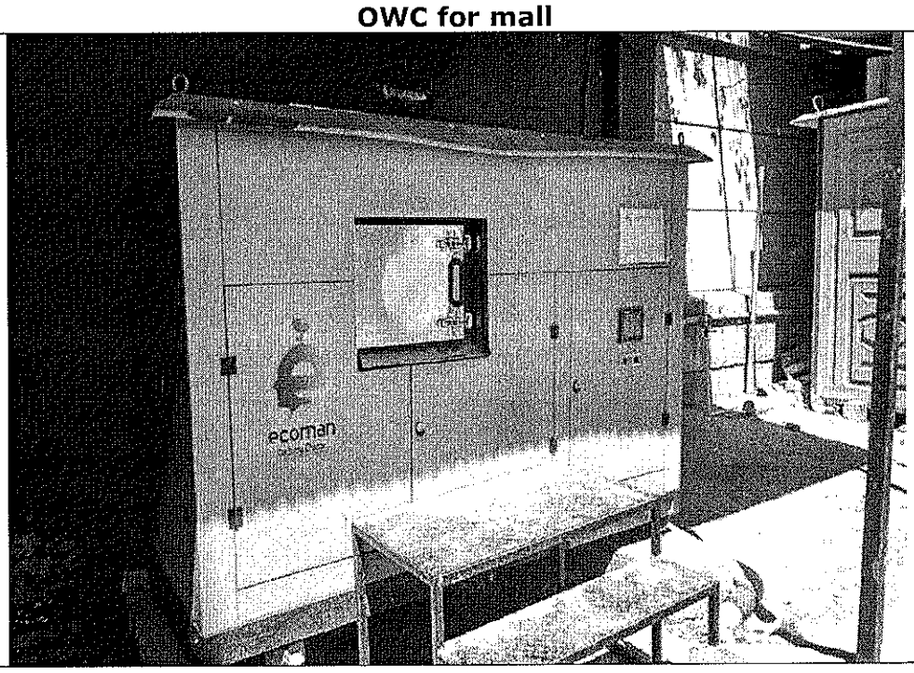


Safety Facility



262

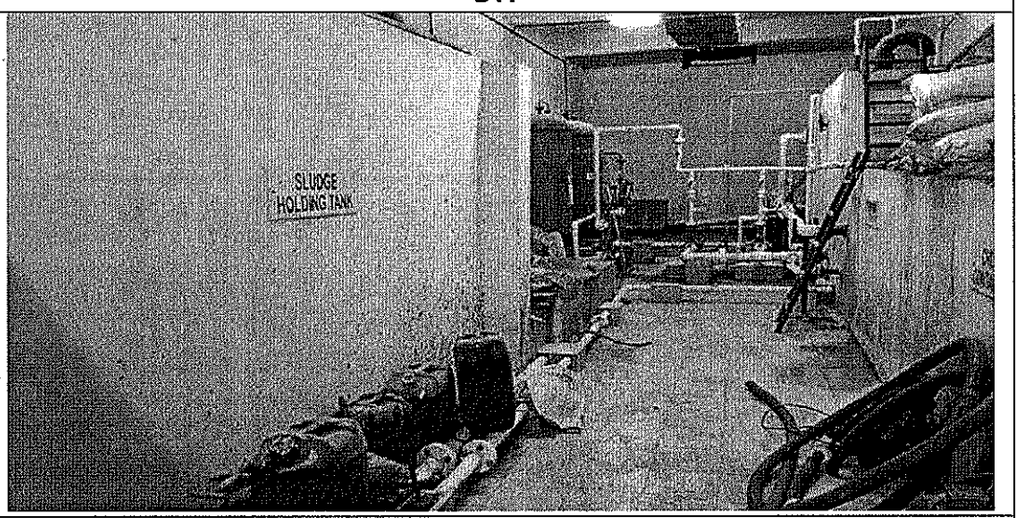
OWC for mall



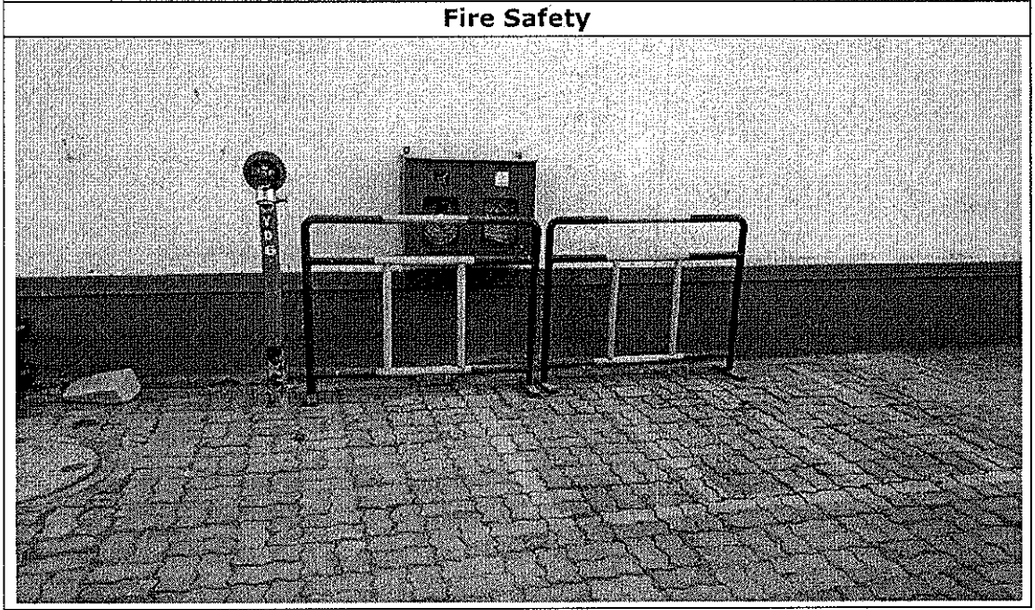
DG Set for mall



STP



Fire Safety



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Annexure III
Monitoring Report
(As per EC Condition: Part B General Condition iii)

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Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN0994-170612-SA-XION-PUNE			**Date:** 12.06.2017
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	08.06.2017	**Date of Receipt of Sample**	09.06.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	09.06.2017	**Date of Completion of Analysis**	12.06.2017

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	65	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	5.8	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	581	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	26	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.28	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	32	IS 11255 (Part 7): 2005
Remarks :			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

Note:
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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Ambient Air Quality Monitoring Report

Report No.: ME-PN0991-170612-SA-XION-PUNE			**Date:** 12.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	08.06.2017	**Date of Receipt of Sample**	09.06.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	09.06.2017	**Date of Completion of Analysis**	12.06.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
9 km/h	W	66.6	56.4	32	27
Location	Main Gate			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.0	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	68	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	32	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Ambient Air Quality Monitoring Report

Report No.: ME-PN0992-170612-SA-XION-PUNE			**Date:** 12.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	08.06.2017	**Date of Receipt of Sample**	09.06.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	09.06.2017	**Date of Completion of Analysis**	12.06.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
9 km/h	W	66.6	56.4	32	27
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Ambient Air Quality Monitoring Report

Report No.: ME-PN0993-170612-SA-XION-PUNE			**Date:** 12.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	08.06.2017	**Date of Receipt of Sample**	09.06.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	09.06.2017	**Date of Completion of Analysis**	12.06.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
9 km/h	W	66.6	56.4	32	27
Location	Near Hotel Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	12.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	69	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN-170612-SA-XION-PUNE		**Date:** 12.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	08.06.2017	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:05	64.4	60.9
2	Near Hotel	11:10	64.8	60.2
3	Near Parking	11:15	63.2	54.0
4	Near Labour Camp	11:25	64.1	54.0
5	Near Anchor Bank	11:35	64.6	63.7
6.	Near Mall	11:45	65.2	64.2

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
A	Industrial	75	70
B	Commercial	65	60
C	Residential	55	45

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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TECHNICAL MANAGER

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0990-170613-SA-XION-PUNE			**Date:** 13.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	09.06.2017	**Date of Receipt of Sample**	10.06.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	10.06.2017	**Date of Completion of Analysis**	13.06.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.5	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	98	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	42	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	66	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	18.0	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	16.1	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.75	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	12.8	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.31	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.104	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Mahabal Enviro Engineers Pvt. Ltd.

Continuation Sheet

Report No.0990 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Water Sample Analysis Report

Report No.: ME-PN0989-170613-SA-XION-PUNE			**Date:** 13.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	09.06.2017	**Date of Receipt of Sample**	10.06.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	10.06.2017	**Date of Completion of Analysis**	13.06.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.3	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	440	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	204	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	276	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	80.0	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	47.2	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	13.6	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	64.1	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.69	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.44	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Continuation Sheet

Report No. 0989 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.082	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	<1.1	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76

Remark: N.D. : Not Detected

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Soil Sample Analysis Report

Report No. : ME-PN0995-170612-SA-XION-PUNE			**Date:** 12.06.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Soil	**Sample Collected by**	Laboratory
Sampling Location	Project Site	**Sample Quantity/Packing**	1 kg X 1 No. Polyethene Bag
Date of Sampling	08.06.2017	**Date of Receipt of Sample**	09.06.2017
Sampling Procedure	Manual on Soil, Plant & Water Analysis		
Date of Start of Analysis	09.06.2017	**Date of Completion of Analysis**	12.06.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	pH (1:5 Suspension)	-	7.3	IS 2720 (Part 26) :1987, RA 2002
2	Moisture Content	%	3.9	IS 2720 (Part II): 1973, RA 2002, Ed. 3.1
3	Organic Carbon	%	0.55	WLII Sec. B7, Page No. 10
4	Available Nitrogen (as N)	mg/kg	110	WLII Page No. 13
5	Total Phosphate (as P)	mg/kg	344	WLII Sec. B10, Page No. 16
6	Cadmium (as Cd)	mg/kg	<2	USEPA method No. 200, 200.2
7	Chromium (as Cr)	mg/kg	14.2	USEPA method No. 200, 200.2
8	Copper (as Cu)	mg/kg	40.2	USEPA method No. 200, 200.2
9	Lead (as Pb)	mg/kg	13.3	USEPA method No. 200, 200.2
10	Chloride (as Cl)	mg/kg	90.5	IBM Manual 6.19 D, Page No. 236
11	Zinc (as Zn)	mg/kg	43.3	USEPA method No. 200, 200.2
12	Sulphate (as SO_4)	mg/kg	159	IS 2720 (Part XXVII):1977, RA 2001.
13	Oil & Grease	mg/kg	N.D	CPCB (HW) manual, Page No. 156

Remarks:
Note- All results are on air dry basis.
WLII- Wildlife Institute of India.
N.D.-Not Detected

----------END----------

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN1279-170714-SA-XION-PUNE			**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	10.07.2017	**Date of Receipt of Sample**	11.07.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.07.2017	**Date of Completion of Analysis**	14.07.2017

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	60	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	4.7	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	476	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	29	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.20	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	38	IS 11255 (Part 7): 2005
Remarks :			

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1276-170714-SA-XION-PUNE			**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	10.07.2017	**Date of Receipt of Sample**	11.07.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.07.2017	**Date of Completion of Analysis**	14.07.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5.7 km/h	W	75.5	63.2	29	23
Location	Main Gate			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	µg/m^3	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	µg/m^3	13.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	µg/m^3	57	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	µg/m^3	25	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1277-170714-SA-XION-PUNE			**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	10.07.2017	**Date of Receipt of Sample**	11.07.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.07.2017	**Date of Completion of Analysis**	14.07.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5.7 km/h	W	75.5	63.2	29	23
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	4.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	12.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	55	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	22	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1278-170714-SA-XION-PUNE			**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	10.07.2017	**Date of Receipt of Sample**	11.07.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.07.2017	**Date of Completion of Analysis**	14.07.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5.7 km/h	W	75.5	63.2	29	23
Location	Near Hotel Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	<4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	7.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	26	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN-170714-SA-XION-PUNE		**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	10.07.2017	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:10	62.9	60.2
2	Near Hotel	11:20	64.2	61.2
3	Near Parking	11:30	62.0	55.2
4	Near Labour Camp	11:25	63.5	53.5
5	Near Anchor Bank	11:35	64.3	62.0
6.	Near Mall	11:45	64.3	63.1

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
A	Industrial	75	70
B	Commercial	65	60
C	Residential	55	45

----------END----------

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN1275-170714-SA-XION-PUNE			**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	10.07.2017	**Date of Receipt of Sample**	11.07.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	11.07.2017	**Date of Completion of Analysis**	14.07.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.7	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.8	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	108	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	46	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	72	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	20.0	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	18.5	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.86	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	14.4	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.28	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.098	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Continuation Sheet

Report No. 1275 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Water Sample Analysis Report

Report No.: ME-PN1274-170714-SA-XION-PUNE			**Date:** 14.07.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	10.07.2017	**Date of Receipt of Sample**	11.07.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	11.07.2017	**Date of Completion of Analysis**	14.07.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	2	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	1.0	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.4	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	392	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	190	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	252	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	70.0	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	39.5	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	10.6	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	60.1	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.54	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.59	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Continuation Sheet

Report No. 1274 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.068	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	5.1	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

Note:
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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN1579-170814-SA-XION-PUNE			**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	10.08.2017	**Date of Receipt of Sample**	11.08.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.08.2017	**Date of Completion of Analysis**	14.08.2017

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	60	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	4.9	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	496	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	24	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.24	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	40	IS 11255 (Part 7): 2005
Remarks :			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1576-170814-SA-XION-PUNE			**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	10.08.2017	**Date of Receipt of Sample**	11.08.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.08.2017	**Date of Completion of Analysis**	14.08.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
4.2 km/h	SW	84.5	52.1	30	24
Location	Main Gate			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	4.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	11.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	62	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	28	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Ambient Air Quality Monitoring Report

Report No.: ME-PN1577-170814-SA-XION-PUNE			**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	10.08.2017	**Date of Receipt of Sample**	11.08.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.08.2017	**Date of Completion of Analysis**	14.08.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
4.2 km/h	SW	84.5	52.1	30	24
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	<4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	9.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	58	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	25	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1578-170814-SA-XION-PUNE			**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	10.08.2017	**Date of Receipt of Sample**	11.08.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	11.08.2017	**Date of Completion of Analysis**	14.08.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
4.2 km/h	SW	84.5	52.1	30	24
Location	Near Hotel Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	4.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	11.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	66	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN0520-160823-SA-XION-PUNE		**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	10.08.2017	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:15	62.3	58.2
2	Near Hotel	11:25	63.4	60.5
3	Near Parking	11:35	60.0	53.1
4	Near Labour Camp	11:45	59.4	52.0
5	Near Anchor Bank	11:55	63.7	60.8
6.	Near Mall	11:60	64.2	62.5

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
A	Industrial	75	70
B	Commercial	65	60
C	Residential	55	45

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Water Sample Analysis Report

Report No.: ME-PN1575-170814-SA-XION-PUNE			**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	10.08.2017	**Date of Receipt of Sample**	11.08.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	11.08.2017	**Date of Completion of Analysis**	14.08.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.9	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.6	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	90	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	40	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	58	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	14.0	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	15.2	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.55	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	11.2	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.33	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	<0.08	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Continuation Sheet

Report No.1575 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN1574-170814-SA-XION-PUNE			**Date:** 14.08.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	10.08.2017	**Date of Receipt of Sample**	11.08.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	11.08.2017	**Date of Completion of Analysis**	14.08.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.9	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.5	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	350	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	180	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	234	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	58.5	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	33.8	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	9.54	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	57.7	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.51	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.48	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Continuation Sheet

Report No.1574 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.054	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	3.6	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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TECHNICAL MANAGER

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Stack Emission Monitoring Report

Report No.: ME-PN1978-170915-SA-XION-PUNE			**Date:** 15.09.2017
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	58	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	4.7	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	478	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	22	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.21	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	34	IS 11255 (Part 7): 2005
Remarks :			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1973-170917-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1 km/h	E	81	70	31	23

Location Main Gate — **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.0	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	66	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

Note:
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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1974-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1 km/h	E	81	70	31	23
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	11.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	64	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1975-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1 km/h	E	81	70	31	23

Location Near Hotel Building — **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	9.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	72	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2322-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1.5 km/h	NE	73	61	33	20

Location Main Gate — **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	12.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	27	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2323-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1.5 km/h	NE	73	61	33	20
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	56	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	22	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Ambient Air Quality Monitoring Report

Report No.: ME-PN2324-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1.5 km/h	NE	73	61	33	20
Location	Near Hotel Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	4.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	10.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	68	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN1977-170915-SA-XION-PUNE		**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	11.09.2017	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:05	64.2	60.5
2	Near Hotel	11:10	64.8	61.3
3	Near Parking	11:15	63.6	54.0
4	Near Labour Camp	11:25	64.2	54.2
5	Near Anchor Bank	11:35	64.5	63.4
6.	Near Mall	11:45	65.7	64.3

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
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Water Sample Analysis Report

Report No.: ME-PN1976-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.6	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.5	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	82	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	34	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	54	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	15	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	13.1	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.62	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	9.6	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.3	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	<0.08	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Continuation Sheet

Report No.1976 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Water Sample Analysis Report

Report No.: ME-PN1979-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.7	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	332	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	172	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	228	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	49.5	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	30.2	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	7.76	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	52.9	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.48	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.38	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Mahabal Enviro Engineers Pvt. Ltd.

Continuation Sheet

Report No. 1979 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.048	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	<1.1	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN1976-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.6	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.5	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	82	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	34	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	54	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	15	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	13.1	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.62	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	9.6	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.3	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	<0.08	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Continuation Sheet

Report No.1976 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN1979-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.7	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	332	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	172	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	228	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	49.5	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	30.2	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	7.76	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	52.9	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.48	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.38	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Continuation Sheet

Report No. 1979 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.048	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	<1.1	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN2327-171009-SA-XION-PUNE			**Date:** 09.10.2017
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	59	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	4.8	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	487	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	28	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.23	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	36	IS 11255 (Part 7): 2005
Remarks :			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1973-170917-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1 km/h	E	81	70	31	23

Location Main Gate — **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	µg/m^3	6.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	µg/m^3	13.0	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	µg/m^3	66	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	µg/m^3	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1974-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1 km/h	E	81	70	31	23

Location Near Mall Building **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	11.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	64	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN1975-170915-SA-XION-PUNE			**Date:** 15.09.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2017	**Date of Receipt of Sample**	12.09.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2017	**Date of Completion of Analysis**	15.09.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1 km/h	E	81	70	31	23

Location Near Hotel Building **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	9.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	72	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2322-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1.5 km/h	NE	73	61	33	20

Location Main Gate — **Duration of Survey :** 08 hours

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	5.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	12.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	27	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2323-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1.5 km/h	NE	73	61	33	20
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	56	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	22	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2324-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
1.5 km/h	NE	73	61	33	20
Location	Near Hotel Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	4.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	10.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	68	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN2326-171009-SA-XION-PUNE		**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	05.10.2017	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:05	64.2	60.5
2	Near Hotel	11:10	64.8	61.3
3	Near Parking	11:15	63.6	54.0
4	Near Labour Camp	11:25	64.2	54.2
5	Near Anchor Bank	11:35	64.5	63.4
6.	Near Mall	11:45	65.7	64.3

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

----------END----------

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(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN2325-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.5	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.6	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	78	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	34	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	50	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	13	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	11	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.58	APHA 22nd Ed. 2012, 4500-NO_3.E, 4-125
12	Calcium(as Ca)	mg/L	8.8	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.32	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	<0.08	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Continuation Sheet

Report No.2325 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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TECHNICAL MANAGER

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN2328-171009-SA-XION-PUNE			**Date:** 09.10.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	05.10.2017	**Date of Receipt of Sample**	06.10.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	06.10.2017	**Date of Completion of Analysis**	09.10.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	8.5	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	320	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	168	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	214	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	45	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	29	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	8.1	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	51.3	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.56	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.39	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Continuation Sheet

Report No. 2328 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.052	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	2.2	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN2785-171111-SA-XION-PUNE			**Date:** 11.11.2017
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	07.11.2017	**Date of Receipt of Sample**	08.11.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	08.11.2017	**Date of Completion of Analysis**	11.11.2017

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	60	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	5.1	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	516	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	30	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.26	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	37	IS 11255 (Part 7): 2005
Remarks :			

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2779-171111-SA-XION-PUNE			**Date:** 11.11.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	07.11.2017	**Date of Receipt of Sample**	08.11.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	08.11.2017	**Date of Completion of Analysis**	11.11.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
3 km/h	NE	75.7	62.3	30	21
Location	Main Gate			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	64	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	32	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2780-171111-SA-XION-PUNE			**Date:** 11.11.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	07.11.2017	**Date of Receipt of Sample**	08.11.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	08.11.2017	**Date of Completion of Analysis**	11.11.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
3 km/h	NE	75.7	62.3	30	21
Location	Near Mall Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	4.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	12.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	26	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN2781-171111-SA-XION-PUNE			**Date:** 11.11.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	07.11.2017	**Date of Receipt of Sample**	08.11.2017
Sampling Procedure	As per method reference		
Date of Start of Analysis	08.11.2017	**Date of Completion of Analysis**	11.11.2017

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
3 km/h	NE	75.7	62.3	30	21
Location	Near Hotel Building			**Duration of Survey :** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	11.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	27	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

Note:
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Mahabal Enviro Engineers Pvt. Ltd.

Engineers, Consultants, Environmental Monitoring Laboratory & Contractors
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN2784-171111-SA-XION-PUNE		**Date:** 11.11.2017
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	07.11.2017	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:05	64.2	60.5
2	Near Hotel	11:10	64.8	61.3
3	Near Parking	11:15	63.6	54.0
4	Near Labour Camp	11:25	64.2	54.2
5	Near Anchor Bank	11:35	64.5	63.4
6.	Near Mall	11:45	65.7	64.3

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

Mahabal Enviro Engineers Pvt. Ltd.

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN2783-171111-SA-XION-PUNE			**Date:** 11.11.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X No. Sterilised Glass Bottle
Date of Sampling	07.11.2017	**Date of Receipt of Sample**	08.11.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	08.11.2017	**Date of Completion of Analysis**	11.11.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.3	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.6	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	87	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	38	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	56	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	16.5	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	14	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	1.65	APHA 22nd Ed. 2012, 4500-NO_3-E, 4-125
12	Calcium(as Ca)	mg/L	11.2	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.34	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.098	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Mahabal Enviro Engineers Pvt. Ltd.

Continuation Sheet

Report No. 2783 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	<0.01	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN2782-171111-SA-XION-PUNE			**Date:** 11.11.2017
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	07.11.2017	**Date of Receipt of Sample**	08.11.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 22nd Ed. 2012, 1060-B, 1-39; 9060 A, 9-35		
Date of Start of Analysis	08.11.2017	**Date of Completion of Analysis**	11.11.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.7	APHA 22nd Ed. 2012, 2130-B, 2-13
5	pH	-	8.2	APHA 22nd Ed. 2012, 4500-H^+-B, 4-92
6	Total Dissolved Solids	mg/L	340	IS 3025 (Part 16):1984 Reaffirmed 2006
7	Alkalinity Total (as $CaCO_3$)	mg/L	176	IS 3025 (Part 23):1986 Reaffirmed 2009
8	Total Hardness (as $CaCO_3$)	mg/L	238	APHA 22nd Ed. 2012, 2340-C, 2-44,45
9	Chloride (as Cl)	mg/L	54	APHA 22nd Ed. 2012, 4500-Cl-B, 4-72
10	Sulphate (as SO_4)	mg/L	33.8	APHA 22nd Ed. 2012, 4500- SO_4-E, 4-190
11	Nitrate (as NO_3)	mg/L	9.02	APHA 22nd Ed. 2012, 4500-NO_3.E, 4-125
12	Calcium(as Ca)	mg/L	56.1	APHA 22nd Ed. 2012, 3500-Ca-B, 3-67
13	Fluoride (as F)	mg/L	0.54	APHA 22nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
14	Iron (as Fe)	mg/L	0.44	APHA 22nd Ed. 2012, 3111-B, 3-18
15	Manganese (as Mn)	mg/L	<0.04	APHA 22nd Ed. 2012, 3111-B, 3-18
16	Cadmium (as Cd)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Mahabal Enviro Engineers Pvt. Ltd.

Continuation Sheet

Report No.2782 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 22nd Ed. 2012, 3500- Cr-B, 3-69
18	Copper (as Cu)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
19	Lead (as Pb)	mg/L	N.D.	APHA 22nd Ed. 2012, 3111-B, 3-18
20	Zinc (as Zn)	mg/L	0.059	APHA 22nd Ed. 2012, 3111-B, 3-18
21	Arsenic (as As)	mg/L	<0.01	APHA 22nd Ed. 2012, 3114-C, 3-38
22	Mercury (as Hg)	mg/L	N.D.	APHA 22nd Ed. 2012, 3112-B, 3-23
23	Cyanide (as CN)	mg/L	N.D.	APHA 22nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 22nd Ed. 2012, 5540-C, 5-53
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 22nd Ed. 2012, 5530- B & C, 5-47
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	<1.1	APHA 22nd Ed. 2012, 9221-D, 9-73
27	E-Coli	MPN/ 100 mL	Absent	APHA 22nd Ed. 2012, 9221-G, 9-76
Remark: N.D. : Not Detected				

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

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2. This report is not to be reproduced except in full, without written approval of the laboratory.

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Annexure IV
Environmental Clearance Letter
(As per EC Condition: Part A (xxii)

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COPY OF ENVIRONMENT CLEARANCE LETTER

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By Speed Post

F.No. 21-777/2007-IA.III
Government of India
Ministry of Environment and Forests
(I.A. division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110510

Dated: 04.03.2008

To,

M/s PSC Pacific,
PSC House, CTS No.111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune 411004
Maharashtra

Subject: Environmental Clearance for proposed construction of commercial complex Xion- mixed use development at Hinjewadi, Pune, Maharashtra.

Dear Sir,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. Form 1 & 1 A, and Conceptual Plan and the additional clarifications furnished in response to the observations of the Additional Expert Appraisal Committee constituted by the competent authority in its 24th meeting held on Nobermber 22-24, 2007.

2. The project proponent is proposing for construction of commercial complex ?Xion?- mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hingewadi, Pune, Maharashta at a cost of Rs. 75 crore. The proposed project comprises construction of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq. m. The total built up area as indicated is 46,040.96 sq. m. Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu. m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste

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water will be disposed of in public sewer. The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504.

3. The EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the EMP and other stipulated conditions. Accordingly, the Ministry hereby accords necessary environmental clearance for the project under category 8 (a) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

PART A- SPECIFIC CONDITIONS

I. <u>Construction Phase</u>

i. Vehicles hired for construction activities should be operated only during non-peak hours.

ii. All the top soil excavated during construction activities should be stored for use in horticulture/landscape developments within the project site.

iii. Ready mixed concrete shall be used in building construction.

iv. Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.

v. Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction/operation of the project.

vi. Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

vii. Use of glass may be reduced upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.

viii. Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.

ix. Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.

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x. Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.

xi. All required sanitary and hygienic measures including portable toilets/septic tank etc. for labour should be in place before starting construction activities and to be maintained throughout the construction phase.

xii. Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.

xiii. A First Aid Room will be provided at the project site both during construction and operation of the project.

xiv. Adequate drinking water facility should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.

xv. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and be disposed off taking the necessary precautions for general safety and health aspects of people.

xvi. Diesel power generating sets used during construction phase should be of ?enclosed type? to prevent noise and should conform to rules made under Environment (Protection) Act 1986, prescribed for air and noise emission standards.

xvii. Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.

xviii. The construction agencies shall use flyash based material/ products as per the provisions of fly ash notification of 14.9.1999 and as amended on 27.8.2003.

xix. Vehicles hired for bringing construction material at site should be in good condition and should have valid ?pollution under check?(PUC) certificate and to conform to applicable air and noise emission standards and should be operated only during non-peaking hours.

xx. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they should not leach into the ground water.

xxi. Any hazardous waste generated during construction phase should be disposed of as per applicable Rules & norms with necessary approvals of the State Pollution Control Board.

xxii. Under the provisions of the Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it was

found that construction of the project had started without obtaining environmental clearance.

xxiii. The diesel required for operating DG Set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosives shall be taken.

xxiv. The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act from the Competent Authority shall be taken.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.

II. Operation Phase

The environmental clearance recommended to the project is subject to the specific conditions as follows:

i. Diesel power generating sets proposed as source of back up power for lifts, common area illumination and for domestic use should be of ?enclosed type? and conform to rules made under The Environment (Protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.

ii. Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex.

iii. Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.

iv. The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-cycled to the maximum extent possible. In case treated effluent is to be discharged separately during monsoon period consent of State Pollution Control Board shall be taken.

v. Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.

vi. For disinfection of waste water ultra violet radiation shall be used in place of chlorination.

vii. Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be

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removed in a settling tank before its utilization for rainwater harvesting.

viii. The solid waste generated should be properly collected & segregated. Wet garbage (biodegradable) should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.

ix. The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.

x. The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.

xi. A Report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the Ministry in three months time.

xii. The values of R & U for the building envelope should meet the requirements of the hot & humid climatic location. Details of the building envelope should be worked out and furnished in three months time.

xiii. Energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoid Mercury contamination. Use of solar panels may be done to the extent possible.

xiv. The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the premises.

xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.

PART B. GENERAL CONDITIONS

i) The environmental safeguards contained in the documents should be implemented in letter and spirit.

ii) Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.

iii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

4. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents

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during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

7. Necessary permission shall be obtained from the State Fire Department for providing fire safety measures before occupying/ handing over the premises to the owners/ allotees. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.

8. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

9. The project proponent shall enter in to MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Secretary, Department of Environment, Government of Maharashtra, New Administrative Building, 15th Floor, Opp. Mantralaya, Mumbai.
2. The Member Secretary, Maharashtra State Pollution Control Board, Kalptaru Point, 3rd Floor, Near Sion Circle Opp. Cine Planet Cinema, Sion(E), Mumbai.
3. The CCF, Regional Office, Ministry of Envi ronment & Forests, Bhopal.
4. IA - Division, MOEF, New Delhi - 110001.
5. Guard file.

(K.C. RATHORE)
Additional Director (IA)

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Annexure V
Consent to Establish Letter

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COPY OF NOC FROM MPCB

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MAHARASHTRA POLLUTION CONTROL BOARD

Tel : 2402 0781 / 2401 0437
Fax : 2402 4068
Visit us at :
Website : http://mpcb.mah.nic.in
E-mail : mpcb@vsnl.net

Kalpataru Point,
2nd , 3rd & 4th floor,
Opp. Cineplanet,
Near Sion Circle, Sion (E),
Mumbai - 400 022.

Infrastructure Project/LSI

Consent No. BO/RO (P&P)/EIC No. PN-2305-08/E/CC- 338 **Date:** 01/08/08 /07/2008

Consent to Establish is granted to M/s. Xion,
CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune – 411 057.

located in the area declared under the provisions of Water Act (P&CP) 1974, Air Act (P&CP), 1981 and Authorization under the provisions of H.W (M & H) Rules and amendments thereto subject to the provisions of the Acts and the Rules and the Orders that may be made further and subject to the following terms and conditions :-

1. **The Consent to Establish is valid up to Commissioning of the Project.**

For development of land/plot as new construction activities involves development of commercial complex comprising of Mall & Multiplex, Hotel & Achor shop named as **M/s. Xion, CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune – 411 057.**, on total plot area of **31,451 Sq. Mtrs.** & total built up area of **46,040.96 Sq. Mtrs.**, including utilities and services such as per construction commencement certificate issued by local body.

2. **CONDITIONS UNDER WATER (Prevention & Control of Pollution) ACT, 1974: -**

(i) The quantity of sewage effluent from above construction project shall not exceed **251.0 M^3/Day.**

(ii) **Sewage Effluent Treatment:** The Applicant shall provide a comprehensive sewage treatment plant and treatment as is warranted with reference to influent quality and corresponding mode of disposal and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards: -

(1)	Suspended Solids	Not to exceed	100	mg/l.
(2)	BOD 3 days 27 CC.	Not to exceed	100	mg/l.

(iii) **Sewage effluent Disposal: -**
The treated domestic effluent shall be 100 % recycled and reused for flushing, fire fighting and cooling of Air conditioners. In no case, effluent shall find its way to river Mula directly/indirectly at any time.
The project authorities should opt environmental friendly technologies like ozonation, UV treatment etc by replacing chlorination.
As the distance of the project site from river Mula is 1.5 Km and located in A-II class, laundry & swimming pool activity are not permitted.

(iv) **Non-Hazardous Solid Waste: -**
The total quantity shall not exceed 670 Kg per day and shall be segregated and treated as follows:-

Sr. No.	Type of Segregated solid waste	Quantity Kg/Day	Treatment (After Segregation)	Disposal
1	Total Organic Solid Waste	670 Kg /day	---	Composting

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3. Other Conditions: -

1. All activities shall be in resonance with the provisions of Indian Forest Act, 1927 (16 of 1927), Forest (Conservation) Act, 1980 (69 of 1980) and Wildlife (Protection) Act, 1972 (53 of 1972), and special notification published for area wherever applicable and all the Environmental Statutes and Instruments.
2. This Consent to Establish is issued only for New Construction/Developing Construction Project purposes.
3. No quarrying activities shall be commenced in the area unless appropriate permissions are obtained for a limited quarrying material required for construction of local residential housing and traditional road maintenance work, provided that such quarrying is not done on Forest Lands and the material is not exported to the outside area.
4. There shall be no felling of trees whether on Forest, Government, Revenue or Private lands except as per prevailing Rules.
5. Extraction of Groundwater for the project shall require prior permission of the State Ground Water Authority or other relevant authorities, as applicable;
6. Near the activities that are related to water (like activity of water parks, water sports) and/or in the vicinity of lake, Dissolved Oxygen shall not be less than 5 mg/liter.
7. In order to ensure that the water from this project do not enter into outside environment, the nallas crossing the township/complex premises, shall be lined, covered and made water tight by the applicant within the premises with intermittent inspection of chambers following good engineering practices as per the regulations of local body.
8. The Applicant shall prepare management plan for water harvesting, roof-water reclamation, water/storm water conservation and implement the same before handling over of complex for occupation.
9. Applicant shall provide fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
10. The Applicant shall draw plans for the segregation of solid wastes into biodegradable and non-biodegradable components. The biodegradable material shall be recycled through scientific in-house composting (i.e vermi-composting facility within premises) with the approval of local body. The proper demarked area shall be identified for collection & storage of MSW properly which, shall be finally disposed off at approved Municipal Solid Waste landfill site of local body environmentally acceptable location and method. It is clarified that the term solid waste includes domestic, commercial, and garden wastes, but does not include hazardous and bio-medical wastes. The activities of bio-composting and engineered landfill shall be as per the Municipal Solid Waste (M&H) Rules, 2000.
11. Applicant shall be responsible to take adequate precautionary measures as detailed in this consent.
12. The applicant/generator shall be responsible for safe and scientific collection, transportation, treatment and disposal of Bio-Medical Waste as per the provisions made under the Bio-Medical Waste (Management & Handling) Rules, 1998. Any activity as defined under BMW (M & H) Rules has to obtain a separate Authorization from Maharashtra Pollution Control Board.
13. For disinfections of waste water ultra violet radiation shall be used in place of chlorination
14. Vehicles hired for construction activities should be operated only during non peak hours.
15. Ready mixed concrete used in building construction should apply separately for consent from the Board.
16. The applicant, during the construction stage shall provide

a) Septic tank and soak pit of adequate capacity for the domestic effluent generated due to workers residing at site.

Maharashtra Pollution Control Board Mumbai

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b) Proper loading and unloading of construction material, excavated material and its proper disposal as per MSW (M&H) Rules 2000.

c) Cutting of trees is not permitted, however in unavoidable conditions necessary permission from the local body shall be obtained.

d) Green belt of 33% of the open space shall be developed.

4. The Applicant shall comply with all the provisions of, the Water (Prevention and Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and Rules as Amended, 2003 and Rules there under: -

The daily water consumption for the following categories shall not exceed, as under

	Domestic	**From ULB (In CMD)**	**From other sources (In CMD)**
a)	Domestic	**381**	NA
b)	Make up water for Swimming pool	NA	NA
c)	Make up for fire fighting	NA	NA
d)	Agriculture/Gardening	NA	NA

5. CONDITIONS UNDER AIR (Prevention & Control of Pollution) ACT, 1981: -

The Applicant may install 05 nos. of diesel generating sets (DG Sets), of capacity (04 x 750 KVA) and (1 x 385 KVA) and shall be equipped with comprehensive control system as is warranted with reference to generations of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards: -

(i) **Standards for emissions of air Pollutants**

i)	SPM/TPM	Not to Exceed	150	mg/Nm3
ii)	SO2 (DG set)	Not to Exceed	72	Kg/day

(ii) **The following measure shall be taken.**

a) Adequate mitigation measures shall be taken to control emissions of SO2, NOx, SPM, RSPM.

b) Applicant shall achieve following Ambient Air Quality standards.

1	SPM	Exceed (Annual Average)	140	µg/ m^3
		Exceed (24 hours)	200	µg/ m^3
2	SO_2	Exceed (Annual Average)	60	µg/ m^3
		Exceed (24 hours)	80	µg/ m^3
3	NO_x	Exceed (Annual Average)	60	µg/ m^3
		Exceed (24 hours)	80	µg/ m^3
4	RSPM	Exceed (Annual Average)	60	µg/ m^3
		Exceed (24 hours)	100	µg/ m^3

(iii) **The Applicant shall observe the following fuel patterns**

No.	Type of Fuel	Quantity
1	HSD	3600.0 Kg/Day

(iv) **The Applicant shall erect the Chimney (s) of the following specifications**

No.	Chimney attached to DG	Height above roof
1	DG set 04 x 750 KVA	5.5* mtrs each
2	DG set 01 x 385 KVA	4.0* mtrs

Maharashtra Pollution Control Board

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(v) **Conditions for DG Sets: -**

1. Noise from DG Sets shall be controlled by providing acoustic enclosure or by treating the room acoustically.
2. Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room shall be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) shall also be provided. The measurement of insertion loss shall be done at different points at 0.5 meters from acoustic enclosure/ room and then average.
3. The Applicant should make efforts to bring down noise level due to DG Set, outside the premises, with ambient noise level requirements by proper setting and control measures.
4. Installation of DG Set must be strictly in compliance with recommendations of DG set manufacturer;
5. A proper routine and preventive maintenance procedure for DG Set shall be set and followed in consultation with the DG manufacturers, which would help to prevent noise levels of DG Sets from deteriorating with use.
6. The DG set shall be operated only in case of power failure. The applicant shall make arrangement for regular electrical power.
7. The Applicant shall not cause any nuisance in the surrounding area due to operation of DG sets.
8. In case of problems, the D.G. set shall not be operated until it is set back to satisfactory position.

(vi) **Other Conditions:**

a) The Applicant shall provide ports in the chimney and facilities such as ladder, platform etc for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's staff. The chimneys shall be numbered, as S-1, S-2 etc and these shall be painted/ displayed to facilitate identification.

b) Water spraying shall be done on ground to avoid fugitive emissions.

c) Construction material shall be carried in enclosed vehicles during constriction activities.

(vii) **Conditions For Utilities like Kitchen, Eating Places etc: -**

1. The kitchen shall be provided with exhaust system chimney with oil catcher connected to chimney through ducting.
2. The toilet shall be provided with exhaust system connected to chimney through ducting.
3. The air conditioner shall be vibration proof and the noise shall not exceed 68 dB (A).
4. The exhaust hot air from A.C. shall be attached to Chimney at least 5 mtrs. higher than the nearest tallest building through ducting and shall discharge into open air in such way that no nuisance is caused to neighbors.

(viii) The Applicant shall take adequate measures for control of noise levels from its own sources within the complex (residential cum Commercial) in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Daytime is reckoned as between 6 a.m. to 10 p.m. and Nighttime is reckoned between 10 p.m. to 6 a.m.

(ix) Construction equipments generating noise of less than 65/90 db(A) are permitted.

(x) No construction work is permitted during nighttime.

6. **CONDITIONS UNDER HW (M & H) & AMENDMENT RULES 2003**
The Applicant shall not generate or handle any hazardous waste.

7. The applicant shall certify that the bricks used in construction are manufactured using the ash from Thermal Power stations if it is within a radius of 100 km. from Thermal Power Plant and submit the names of bricks manufacturer.

Maharashtra Pollution Control Board Mumbai

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8. **The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.**
9. **The applicant shall adopt environment friendly technology in development of the project.**
10. **The applicant shall take the proper remediation measures to ensure that the ground water and soil contamination is prevented and follow due diligence at the construction stage.**
11. **The applicant shall use fly ash based material/products as per the provisions of fly ash Notification of 14.09.1999 and as amended on 27.08.2003.**
12. **Energy conservation measures like installation solar panels for lighting the area outside the building should be integrated part of the project design.**
13. **The applicant shall comply with the conditions stipulated in Environmental Clearance granted by MoEF, GOI vide No. 21-777/2007-IA. III dtd. 4th March, 2007.**
14. This Board reserves the right to amend or add any conditions in this consent and the same shall be binding on the Applicant;
15. This consent is issued pursuant to the decision of Consent Committee meeting held on 10.06.2008.
16. The capital investment of the project is Rs. 150/- crores.

For and on behalf of the
Maharashtra Pollution Control Board

(Sanjay Khandare)
Member Secretary

To
M/s. Xion,
CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1,
17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi,
Pune – 411 057.

Copy forwarded with compliments to:
The Collector, Pune.
Copy to -
1. Regional Officer, MPC Board, Pune.
2. Sub Regional officer, MPC Board, Pune.
3. Chief Accounts Officer, MPC Board, Mumbai.

Maharashtra Pollution Control Board Mumbai

Received consent fee of -

Amount	D. D. No.	Date	Drawn on
Rs 1,50,000/-	061491	22.02.2008	Axis Bank

4. Cess Branch, MPC Board, Mumbai. 5. Master file.

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Annexure VI
Environment status Report

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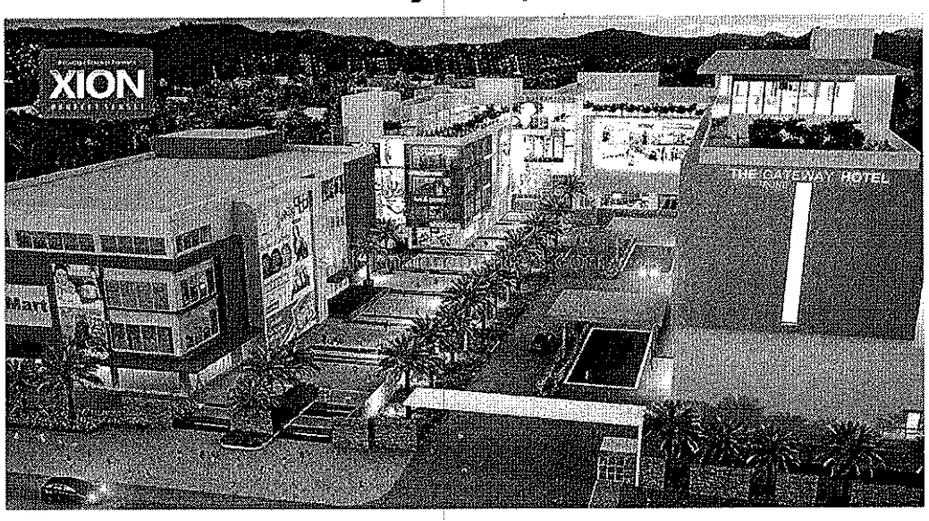
Environmental Status Report (ESR)

June 2017 to November 2017

"Xion"

Mixed Use Development Project

At Hinjwadi,Pune



Proposed by

PSC pacific

Mahabal Enviro Engineers Pvt. Ltd.

Environmental Consultant (NABET Approved)

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra, India

Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Environmental Status Report

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Environmental Status Report

Introduction

PSC Pacific received environment clearance for Mixed used development Project "Xion" at S.No.38/4 at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hinjawadi, Pune, State-Maharashtra. Additional EAC considered the project under screening category 8(a) B2 as per EIA Notification 2006.

Environmental Clearance is obtained vide letter no. F. No. 21-777/2007-IA.III dated 04.03.2008 plot area of 31,451 $m^2$and total built up area of 46,040.96 m^2

Project proponent information

Name	**Ms Nidhi Deshpande** Project Proponent
Address	**PSC Pacific** PSC House, CTS No.111+111/2, Anand Colony, Near Suvarnarekha Dining Hall, Old Karnataka High School Lane, Off Prabhat Road, Pune 411004
Telephone	+91 20 30223344
Fax	+91 20 25460986
Email ID	info@pscl.in

Plot area details

Details	**Total**	**Unit**
Plot area	31,451	m^2
Net plot area	31,451	**m^2**

Proposed construction area details

Details	**Total**	**Unit**
Plot Area	**31,451**	m^2
Total construction area	46,040.96	**m^2**

Table 1: Environmental Services progress status

Sr.	**Details**	**Status**
1.	DG set	Construction has been completed. No DG set for Construction phase
2.	Landscape area	Landscape area developed at site

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Sr.	Details	Status
3.	Tree plantation	- Nos.
4.	STP work	Completed
5.	Solid waste management: OWC details	Completed
6.	Parking	Completed
7.	Labour camp	Construction completed. No labour camp
8.	Excavation details	Completed
9.	Debris details and its management	-construction work completed
10.	Ground water recharge: Rain water harvesting	Completed
11.	Storm water	Completed
12.	RMC plant and brick details	-construction work completed
13.	Contact person on site	Mr. Debashish Seth

Construction facility on site

Construction has completed on site.

Facility provided on site for Labour

Construction has completed on site.

LandExcavation details

Not applicable. Construction work completed.

Water details

Construction phase

Constriction has completed on site.

Operational phase

Water supply source is Hinjawadi Gram Panchayat.

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Sewage Treatment Plant details

Construction phase

As construction completed on site, there is no labour camp at present.

Operational phase

Sewage treatment plant of capacity 310 m3/day is operational at project site. The treated wastewater is being used for gardening and flushing purpose.

Storm Water Drain

We have provided the proper storm water drainage layout along the periphery. And it is connected to the municipal drainage line which already exists. We have received the permission to use this drain line.

Solid Waste Disposal

Construction phase

Construction has completed on site.

Operational phase

We have provided 1 no. of organic waste converter for management of the municipal solid waste. OWC is located on ground level. The biodegradable waste generated from project site is being treated in OWC and manure generated is used for landscaping purpose.

Power Supply and consumption

Construction phase

Construction has completed on site.

Operation Phase

During operation phase power supply from MSEDCL.

Roads, Traffic and Transport details

Construction phase

Construction has completed on site

Operational phase

We have provided proper 6 m & 7.5 m internal roads and their proper connectivity to main road.

Housing and Slums provision

Construction has completed on site

Slums issue is not applicable for this project.

Air Environment

We are monitoring the air quality every month and six-monthlyreport havebeen sent to MoEF, Nagpur and RO & HQ of MPCB offices with the EC compliance condition.

Dust

Construction completed on site

Noise Environnent

We have monitored the Noise pollution every month and six monthly reportsare sent to MoEF, Nagpur and RO & HQ of MPCB offices with the EC compliance conditions.

Industries, Wastes and Hazards

The project is Commercial complex - mixed use development project. Healthfacility

Construction has completed on site.

Other Facility

Construction has completed on site.

Biological Environment

Plantation & Landscaping

Selection of the plant species has been done based on their adaptability to the existing geographical conditions and the vegetation composition of the region. During the development of the green belt within the project area, emphasis has been given to selection of plant species like nitrogen fixing species, species of ornamental values, species of very fast growth with good canopy cover etc.

Landscape development plan

Increasing vegetation in the form of landscape is one of the preferred methods to mitigate air pollution. Plants generate oxygen, serve as a sink for pollutants, reduce the flow of dust and reduce noise pollution.

Environment Monitoring Cell

Environmental management cell is formed headed by an Environment Manager supported by adequate number of personnel having sufficient educational and professional qualification and experience to discharge 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 of pollution control equipment and green belt development & maintenance. The head of the cell will directly report to the top management. This cell is the nodal agency to co-ordinate and provide necessary services on environmental issues during construction and operation of the project. This

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department will interact with MPCB, MoEF, CPCB and Other environment regulatory agencies. The cell will be effective till handing over of the project to society.

Environmental Management Audits:

The management audits are to determine whether the activities are conforming to the environmental management systems and effective in implanting the environmental policy. They may be internal or external, but carried out impartially and effectively by a person properly trained for it. Broad knowledge of the environmental process and expertise in relevant disciplines is also required. Appropriate audit programs and protocols will be established.

Table 2: Organization & Environment Management Cell

Sr.	Level	Designation	Purpose
1	Honorary	Director / Managing Committee	Policy
2	Manager	Environmental Scientist /Chemist	Job (*)
3	Executive	Supervisor, contractor, Engineers	Implement
4	Third Party	Environmental sampling, analysis will be done through external agency **approved by** MoEFCC / MPCB	Monitoring, testing

The Capital Investment of the Project is 150/- crores.

PSC PACIFIC

PSC HOUSE, F.P.NO. 52/1 +52/2, CTS No.111+111/2, ERANDWANA, DR. KETKAR ROAD, PUNE-411004. PH.No.25462128/25469886

17th January 2019

To,
The Director
Regional Office (West Central Zone),
Ministry of Environment, Forest and Climate Change,
Ground Floor, East wing,
New Secretariat Building,
Civil lane, Nagpur-440001

Subject: **Half-yearly Compliance Report: June to November 2018**

Project: **Commercial Complex project "Xion" at Hinjewadi, District Pune by M/s PSC PACIFIC.**

EC No. **F. No. 21-777/2007-IA.III, dated 4th March, 2008**

Dear Sir,

We are herewith submitting half-yearly Compliance Report (hard & soft copy) in respect of the stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,
Yours faithfully,
For M/s PSC Pacific

Project Proponent

Enclosure:
1. A hard copy of the compliance and monitoring report
2. A CD containing the same report

CC copy to:
1. Regional officer, Maharashtra Pollution Control Board, SRO - Pimpri Chinchwad
2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

for the period of

(June, 2018 to Nov, 2018)

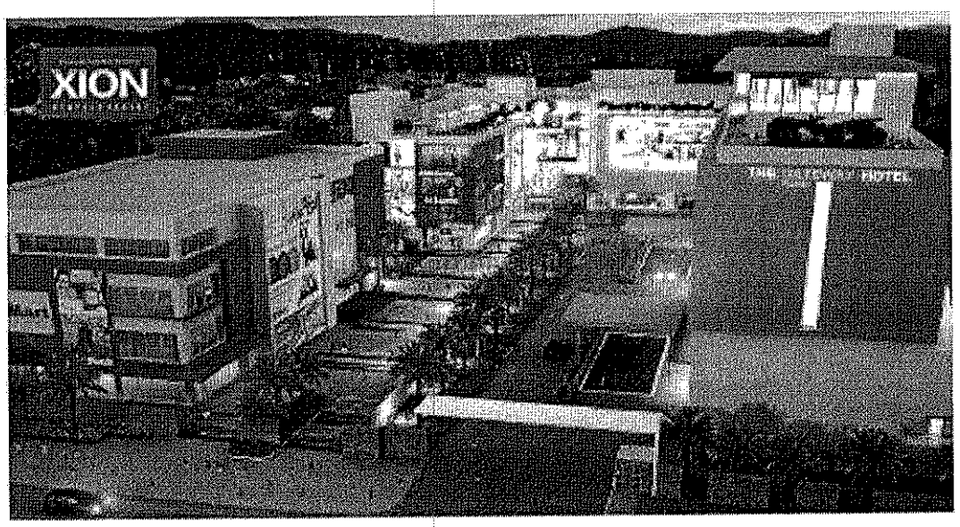
for

Mixed Use Development Project "Xion"

PSC Pacific.

Hinjawadi

(Environmental Clearance Letter no. 21-777/2007-IA.III dated 4th March, 2008)



Proposed by

PSC PACIFIC

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Environmental Clearance

F.No. 21-777/2007-IA.III

Government of India

Ministry of Environment and Forests

(I.A. Division)

Paryavaran Bhavan,
CGO Complex, Lodhi Road
New Delhi 11051

Dated: 04.03.2008

To,
PSC pacific,
PSC House, CTS No. 111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune- 411004
Maharashtra

Subject: **Environmental clearance for proposed Construction of complex Xion-mixed use development at Hinjewadi Pune, Maharashtra.**

Dear Sir,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. the form 1, Form 1A and conceptual plan and the additional clarifications furnished in response to the Observations of the Additional Expert Appraisal Committee constituted by the competent authority in its 24th meeting held on November 22-24, 2007.

2. The project proponent is proposing for construction of commercial complex "Xion"–mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune, Maharashtra at a cost of Rs. 75 crore. The proposed project comprises of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq.m. The total built up area as indicted is 46,040.96 sq.m. Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu.m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste water will be disposed of in public sewer. The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504.

3. The additional EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject EMP and other stipulated conditions. Accordingly the Ministry hereby accords necessary environmental clearance for the project under category 8(a) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

Environmental Clearance Condition
Letter no.F.No. 21-777/2007-IA.III dated 04.03.08.

Sr.	Conditions	Compliance	Annex	Photo
	Part A: SPECIFIC CONDITIONS			
1.	**Construction Phase**			
i)	Vehicles hired for construction activities should be operated only during non-peak hours.	Being complied with. Project is in operation phase.		
ii)	All the top soil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.	The top soil generated during construction phase is reused for landscape development.		
iii)	Ready mixed concrete shall be used in building construction.	Being complied with. Project is in operation phase.		
iv)	Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.	Being complied with. Project is in operation phase.		
v)	Permission to draw ground water shall be obtained from competent authority prior to construction/ operation of project.	Being complied with. Project is in operation phase.		
vi)	Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	Being complied with		
vii)	Use of glass may be reduced up to 40% the electricity consumption and load on air conditioning. If necessary use high quality double glass with special reflective coating in windows.	Being complied with.		
viii)	Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.	Being complied with		

Sr.	Conditions	Compliance	Annex	Photo
ix)	Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.	Being complied with		
x)	Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.	We are complying with the condition.		
xi)	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.	Being complied with. Project is in operation phase.		
xii)	Soil and ground water samples will be tested to as certain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	Soil sample from the project site has been tested as per the BS: 10500. Monitoring report are provided.	√	
xiii)	A first aid room will be provided at the Project both during construction and operation of the Project.	Being complied with. Project is in operation phase.		
xiv)	Adequate drinking water and sanitary facilities should be provided for construction at site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	Being complied with. Project is in operation phase.		
xv)	Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and disposed off taking the necessary precautions for general safety and health aspects of people.	Being complied with. Project is in operation phase.		

Sr.	Conditions	Compliance	Annex	Photo
xvi)	Diesel power generating sets used during construction phase should be of ''enclosed type '' to prevent noise and should conform to rules made under Environment (protection) act 1986, prescribed for air and noise emission standards.	DG is enclosed type and conforms to rules made under Environment (protection) act 1986, prescribed for air and noise emission standards.		√
xvii)	Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.	The Noise Level as well as Ambient air pollution quality is monitored regularly from MoEF and NABL recognized laboratory. Monitoring reports are provided.	√	
xviii)	The construction agencies shall use fly ash based material/products as per the provisions of fly ash notification of 14.09.1999 and as amended on 27.08.2003.	Being complied with. Project is in operation phase.		
xix)	Vehicles hired for bringing construction material at site should be in good condition and should have valid "pollution under check" (PUC) certificate & to conform to applicable air and noise emission standards and should be operated only during non peaking hours.	Being complied with. Project is in operation phase.		
xx)	Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	Being complied with. Project is in operation phase.		
xxi)	Any hazardous waste generated during construction phase should be disposed of as per applicable rules and norm with necessary approvals of the Maharashtra State Pollution Control Board.	Being complied with. Project is in operation phase.		

Sr.	Conditions	Compliance	Annex	Photo
xxii)	Under the provisions of Environment (protection) Act 1986, legal action shall be initiated against the project proponent, if it was found that construction of the project had started without obtaining Environmental clearance.	Being complied with. Project is in operation phase.	√	
xxiii)	The diesel required for operating DG set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosive shall be taken.	Being complied with. Project is in operation phase.		
xxiv)	The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of firefighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act from the Competent Authority shall be taken.	Being complied with. Project is in operation phase.		
xxv)	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.	Being complied with. Project is in operation phase.		
	II. Operation Phase			
	The environmental clearance recommended to the project is subject to the specific conditions as follows:			
i	Diesel power Generating sets as source of back up power for lifts and common area illumination should be of "enclosed type" and conform to Rules made under Environmental (protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.	We are complying with the condition.		

Sr.	Conditions	Compliance	Annex	Photo
ii	Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex.	The Noise Level as well as Ambient air pollution quality is monitored regularly from MoEF and NABL recognized laboratory. Monitoring reports are provided.	√	
iii	Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment's area during the monsoon period.	Being complied with.		
iv	The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-cycled to the maximum extent possible. In case treated effluent is to be discharged separately during monsoon period consent of state Pollution Control Board shall be taken	Being complied with.		
v	Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.	Being complied with.		
vi	For disinfection of waste water ultra violet radiation shall be used in place of chlorination.	Being complied with.		
vii	Rainwater harvesting and ground water recharging shall be practiced. Oil & grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.	We have provided recharge pits for rainwater harvesting within project area.		
viii	The solid waste generated should be properly collected, segregated. Wet garbage should be composted & dry/ inert solid waste should be disposed off to approve sites for land filling after recovering recyclable material.	We are complying with the condition. Wet garbage is being composted and recyclable waste is sold to recycler.		

Sr.	Conditions	Compliance	Annex	Photo
ix	The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.	Yes, we are complying with the condition. Green belt is developed around the periphery of the plot.		
x	The ground water levels and its quality should be monitored regularly in consultation with central water authority.	Ground water is not drawn at the site.		
xi	A report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U factors etc. and submitted to the ministry in three months' time.	Being complied with.		
xii	The values of R & U for the Commercial building envelops should meet requirements of the hot & humid climatic location. Details of the building envelopes should be worked out and furnished in three months' time.	The Building envelops are designed in such a way that they meet all requirements of hot & humid location.		
xiii	Energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoid Mercury contamination. Use of Solar panels may be done to h extent possible.	Being complied with. Proper measures are being taken to increase energy conservation.		
xiv	The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the premises.	We have complied with the condition.		

Sr.	Conditions	Compliance	Annex	Photo
xv	Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.	We have complied with the condition.		
Part B: General conditions				
i)	The environmental safeguards contained in the documents should be implemented in letter and spirit.	Being complied with.		
ii)	Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.	Being complied witj. The project is in Operation phase.		
iii)	6 monthly monitoring reports should be submitted to the Ministry and its regional office.	6 monthly monitoring reports are being sent regularly. Monitoring reports are attached.	√	
4.	Officials from the regional office of MoEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MoEF, Bhopal.	Full cooperation and all possible support, information will be provided to Ministry officials along with all the documents.		
5.	In the case of any change(s) in the project, the project would require a fresh appraisal by this Ministry.	We agree with the condition.		
6.	The Ministry reserves the right to additional safeguard measures subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.	We agree with the condition.		

Sr.	Conditions	Compliance	Annex	Photo
7.	Necessary permission shall be obtained shall be obtained from the State Fire Department for providing fire safety measures before occupying over the premises to the owners/allotees. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.	Being complied with. we have obtained necessary permissions from State Fire Dept. There is no forest land involved in project site.		
8.	These stipulations would be enforced among others under the provision of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.	We agree with the condition.		
9.	The Project proponent shall enter into MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.	We agree with the condition.		

Consent to Establish

Infrastructure Project/LSI

Consent No. BO/CAC-cell/Inward no.PN-229-16/Revalid CE/CAC-1802000304

Date: 08/02/2018

Consent to establish is granted to **Xion, CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1,17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune-411057**

Subject: Revalidation of Consent to Establish for Commercial Complex Project (Mall & Multiplex, Hotel, Shop) in RED Category.

Ref:
1. Consent to Establish granted vide No. BO/RO(P&P)/EIC No.PN-2305-08/E/CC-338 dated 01.08.2008
2. Environmental Clearance granted by MoEF Vide No. 21-777/2007-IA.III dated 04.03.2008
3. You application vide inward no.229 dated 27.01.2016
4. MPCB letter to Env. Dept letter dated BO/CAC-Cell/TB/M-50 dated 21.03.2017
5. Environment Department, GoM vide No. MIS-2017C.R.34/TC.1 dtd 31.05.2017
6. PP communication letter dated 20.04.2016 & 08.12.2016 and architects certificate dated 01.04.2016 & 11.04.2016 & PP Affidavit dated 01.12.2016
7. Minutes of Consent Appraisal Committee (CAC) meeting held on 12.12.2017

Your application valid inward No.229 dated 27.01.2016

For: Revalidation of Consent to Establish.
Under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous and Other Wastes (Management and Transboundary movement) Rules, 2016 is considered and as detailed in the schedule I,II,III & IV annexed to this order:

1.	The revalidation of Consent to Establish is granted for a period upto commissioning of the unit or upto 31.07.2018 whichever is earlier.
2.	The proposed capital investment of the project is Rs. 194.47 Crs (Cs per C.A. Certificate submitted by project proponent)
3.	The revalidation of Consent to Establish is for Commercial Complex Project (Mall & Multiplex, Hotel, Achor Shop) named as M/s. PSC Pacific "Xion", CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune on total plot area of 31,451 sq. mtrs and total construction built up area 46,040.96 sq. mtrs including utilities and services as per commencement certificate by local body.

Condition of Consent

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>4.</td><td>Conditions under Water (P& CP), 1974 Act for discharge of effluent:
<table>
<tr><th>Sr. No.</th><th>Description</th><th>Permitted quantity of discharge (CMD)</th><th>Standards to be achieved</th><th>Disposal</th></tr>
<tr><td>1.</td><td>Trade effluent</td><td>NIL</td><td>NA</td><td>NA</td></tr>
<tr><td>2.</td><td>Domestic effluent</td><td>251</td><td>As per Schedule I</td><td>The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower makeup, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body.</td></tr>
</table></td><td>The waste water is being treated in STP. The treated wastewater from STP is being used for Gardening and flushing purpose.</td><td></td><td></td></tr>
<tr><td>5.</td><td>Condition under Air (P& CP) Act, 1981 for air emissions:
<table>
<tr><th>Sr. No.</th><th>Description of stack/source</th><th>Number of stack</th><th>Standards to be achieved</th></tr>
<tr><td>1.</td><td>DG set (750 KVA x 4 Nos)</td><td>4</td><td>As per Schedule - II</td></tr>
<tr><td>2.</td><td>DG set (385 KVA)</td><td>1</td><td>As per Schedule - II</td></tr>
</table></td><td>Being complied with.</td><td></td><td>✓</td></tr>
<tr><td>6.</td><td>Conditions under Municipal Solid Waste (Management and Handling) Rule, 2000:
<table>
<tr><th>Sr. No.</th><th>Types of Waste</th><th>Quantity</th><th>Treatment</th><th>Disposal</th></tr>
<tr><td>1.</td><td>biodegradable</td><td>103.0 kg/day</td><td>OWC</td><td>Used as Manure</td></tr>
<tr><td>2.</td><td>Non-Biodegradable</td><td>154.0 kg/day</td><td>---</td><td>Segregate and Hand over to</td></tr>
</table></td><td>Solid waste generated onsite is segregated and disposed off in bins. Organic waste is</td><td></td><td></td></tr>
</table>

Sr.	Condition	Compliance	Annex	photo
	<table><tr><td></td><td></td><td></td><td></td><td>Local Body for recycling</td></tr><tr><td>3.</td><td>STP sludge</td><td>4.0 kg/day</td><td>---</td><td>Used as Manure</td></tr></table>	Composted.		
7.	Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for treatment and disposal of hazardous waste <table><tr><td>Sr. No.</td><td>Type of Waste</td><td>Quantity</td><td>UOM</td><td>Treatment</td><td>Disposal</td></tr><tr><td colspan="6">NIL</td></tr></table>	Being complied with.		
8.	The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.	We agreed with the condition.		
9.	This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.	We agreed with the condition.		
10.	There shall be no felling of trees whether on forest, Government, Revenue or Private lands except as per prevailing Rules.	We agreed with the condition.		
5.	Extraction of ground water for the project shall require prior permission of the state ground water authority or other relevant authorities, as applicable	Ground water is not drawn at the site.		
6.	Near the activities that are related to water (Like activities of water parks, water sports) and/or in the vicinity of lake, Dissolved oxygen shall not be 5mg/liter.	Not Applicable		
7.	In order to ensure that the water from this project do not enter into outside environment, the nallas crossing the township/complex premises, shall be lined, covered and made water tight by the applicant within the premises with intermittent inspection of chambers following good engineering practices as per the regulations of the local body.	Being complied with.		
8.	The applicant shall prepare management plan for water harvesting, roof-water reclamation, water/storm water conservation and implement the same before handing over of complex for occupation.	Being complied with.		
9.	Applicant shall provide fixtures of showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor-based control.	Being complied with.		
10.	PP shall submit an affidavit in prescribed format regarding compliance of conditions of EC and Consent to Establish condition.	Being complied with.		
11.	PP shall achieve the treated domestic effluent	We agree	√	

Sr.	Condition	Compliance	Annex	photo
	standard for the parameter BOD-10 mg/lit.	with the conditions		
12.	The treated effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning cooling tower makeup, firefighting etc. and remaining shall be utilized land for gardening.	We agree with the conditions		
13	PP shall install online monitoring system for BOD, TSS and flow at the outlet of STP.	Being complied with.		
14.	PP shall comply conditions stipulated in Environment Clearance issued by MoEf vide no. F No. 21-777/2007-IA.III dtd 04.03.2008	We agree with the condition		
15.	This consent is issued as per Environment dep, GoM letter vide no. MIS-2017/C.R. 34/T.C.1 dated 31st May, 2017 in which authority has submitted clarification stating That if construction is completed within the validity of EC, then no fresh EC or extension to EC is required.	We agree with the condition		
16.	This consent is issued as per evidences submitted by PP vide communication letter dated 20.04.2016 & 08.12.2016 and architects certificate dated 01.04.2016 & 11.04.2016 & PP affidavit dated 01.12.2016	We agree with the condition		

Fee Details:
Received consent fee of:

Sr. No.	DD No.	Bank Name	Amount	date
1.	1A2523	HDFC Bank	3,00,000/-	21.01.2016
2.	0000000001369	HDFC Bank	75,000/-	31.01.2016

Copy to:

1) Regional Officer, MPCB Board, Pune and Sub Regional Officer, MPCB, Pune-2 They are directed to ensure the compliance of the consent conditions.
2) Chief Accounts Officer, MPCB Board, Mumbai.
3) CC/CAC desk-for record & website updation purposes.

Schedule I

Teams and condition as for compliance of Water Pollution Control:

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>1)</td><td>A) As per your application, you have provided Sewage treatment plants(STP) of Capacity 200 CMD of MBBR Technology</td><td>Being complied with. we have provided 3 nos of STPs having total capacity 400 KLD (Hotel-200 m3/day, Mall, Multiplex and Anchor Shops - 150 m3/day and 50 m3/day).</td><td></td><td></td></tr>
<tr><td>2)</td><td>B) The applicant shall operate the effluent treatment plant (STP) to treat the sewage so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.
<table>
<tr><th>Sr.No</th><th>Parameters</th><th>Standards prescribed by Board</th></tr>
<tr><td></td><td></td><td>Limiting Concentration in mg/l, except for pH</td></tr>
<tr><td>01</td><td>pH</td><td>6.5 to 9</td></tr>
<tr><td>02</td><td>BOD (3 days 27oC)</td><td>20</td></tr>
<tr><td>03</td><td>Total Suspended Solids (TSS)</td><td>50</td></tr>
<tr><td>04</td><td>COD</td><td>100</td></tr>
<tr><td>05</td><td>Residual Chlorine</td><td>1ppm</td></tr>
<tr><td>06</td><td>Detergent</td><td>2</td></tr>
<tr><td>07</td><td>Fecal Coliform</td><td><1000</td></tr>
</table></td><td>We are complying with the condition.</td><td></td><td></td></tr>
<tr><td></td><td>C) The treated effluent shall be 60% recycled for secondary purpose such as toilet flushing, Air conditions, cooling tower makeup, firefighting etc. Remaining shall be connected to the swerage line system provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time. Project Proponent shall archive the treated domestic effluent standards for the parameter BOD-10 mg/lit within six months period and shall install online monitoring system within six months period and shall install online monitoring system within three</td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td></td><td>months.</td><td></td><td></td><td></td></tr>
<tr><td>3)</td><td>The Boards reserved its rights to review plans, specification or other data relating to plant setup for the treatment of waterworks for the purification thereof &the system for the disposal of sewage or tread effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>4)</td><td>The industry should ensure the replacement of pollution control system or its parts after expiry of its expected life as defined by manufactured so as to ensure the compliance of standers and safety of the operation thereof.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>5)</td><td>In, case the water consumption of the project is not covered under the water consumption of local body, in that situation, the project proponent shall submit certificate to that effect from the concern local body with the request not to assess CESS on their water consumption, being already assessed on the water consumption of local body.
<table>
<tr><th>Sr.No</th><th>Purpose of water consumed</th><th>Water consumption Quantity</th></tr>
<tr><td>1.</td><td>Industrial Colling, spraying in mine pits or boiler feed</td><td>381</td></tr>
<tr><td>2.</td><td>Domestic Purpose</td><td>0.00</td></tr>
<tr><td>3.</td><td>Processing whereby water gets polluted & pollutants are easily biodegradable</td><td>0.00</td></tr>
<tr><td>4.</td><td>Processing whereby water gets polluted & pollutants are not easily biodegradable and toxic.</td><td>0.00</td></tr>
</table></td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

Schedule II

Teams and condition as for compliance of Air Pollution Control:

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>1)</td><td>A) As per your application, you have proposed to installed the Air pollution control (APC) system and also erected following stack (s) and to observed the following fuel patterns:-
<table>
<tr><th>Sr. No</th><th>Satck Attached to</th><th>ASP System</th><th>Hight in Mtrs</th><th>Type of fuel</th><th>Quantity and UoM</th><th>S Kg/Day</th><th>SO2 Kg/Day</th></tr>
<tr><td>01.</td><td>DG Sets (750 KVA X4)</td><td>Acoustic Enclosure</td><td>5.5 *</td><td>Diesel</td><td>3600 Kg/day</td><td>36</td><td>72</td></tr>
<tr><td>02.</td><td>DG Set (385 KVA)</td><td>Acoustic Enclosure</td><td>4.0 *</td><td>Diesel</td><td></td><td></td><td></td></tr>
</table>
*Above roof of the building in which it is installed.</td><td>We have complied with the condition.</td><td></td><td></td></tr>
<tr><td>2)</td><td>The applicant shall operate and maintain above maintained air pollution control system, so as to achieve the level of pollutants to the following standards
<table>
<tr><td>Particular matter</td><td>Not Exceed</td><td>150 mg/Nm^3</td></tr>
</table></td><td>WE complying with the condition.</td><td></td><td></td></tr>
<tr><td>3)</td><td>The applicant shall obtain necessary prior permission for providing additional control equipment with necessary specification and operation thereof alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>4)</td><td>The Boards reserved its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary.</td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

Schedule III
Details of Bank Guarantees

Project Proponent shall extend the Bank Guarantees as below:

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>1.</td><td>
<table>
<tr><th>Sr. No</th><th>Consent (renewal of C to O)</th><th>Amt of BG Imposed</th><th>Submission Period **</th><th>Purpose of BG#</th><th>Compliance Period</th><th>Validity</th></tr>
<tr><td>1</td><td>Revalidation of consent to Establish</td><td>Rs.25 Lakh*</td><td>Within 15 days</td><td>Towards compliance of EC and C to E Condition</td><td>Continuous</td><td>29.07.2022</td></tr>
</table>
</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>2.</td><td>The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional officer within 15 days of the date of issue of Consent.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>3.</td><td>The Bank Guarantee(s) shall be valid for a period upto: Validity of consent + 4 months.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>4</td><td>Existing BG obtained for above purpose if any may be extended for period of validity as above.</td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

Schedule III

Conduction during construction phase:

Sr.	Condition	Compliance	Annex	photo
a.	During construction phase, applicant shall provide temporary sewage disposal and MSW facility for staff and workers quarters.	Being complied with		
b.	During construction phase, the ambient air and noise quality should be closely monitored to achieve Ambient Air Quantity Standards and Noise by the project proponent through MoEF approved laboratory.	Being complied with		
c.	Noise should be controlled to ensure that it does not exceed prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible level to comply with the prevalent regulation.	Being complied with		

General Condition :

Sr.	Condition	Compliance	Annex	photo
1)	The applicant should provide facility for collection of samples of sewage effluents, air emission and hazardous waste to the Board staff at the terminal or designated points and should pay to the Board for the services rendered in this behalf.	Being complied with.		
2)	The firm should strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and environmental protection Act 1986 and Municipal Solid Waste (Management & Handling) Rules 2000, Noise (Pollution Control) Rules,2000 and E-Waste(Management & Handling) Rules, 2011.	We agree with the condition.		
3)	Drainage system should be provided for collection of sewage effluents. Terminal manholes should be provided at the end of the collection system with arrangement for measuring the flow, no sewage should be admitted in the pipes/sewers downstream of the terminal manholes. No sewage should find its way other than designed and provided collection system.	Being complied with.		
4)	Vehicles hired for brining construction material to the site should be in good conditions. And should conform to applicable air and noise emission standards and should be operate only during non-peak hours.	We have complied with the condition		
5)	Condition under DG Set a) Noise from the D.G. Set should be controlled by providing an acoustics enclosure or by treating the room acoustically. b) Industry should be provided acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) should also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure room and then average. c) The industry should take adequate measures for control of noise levels from its own sources within the premises its respect of noise to less than 55 dB(A) during day time and 45 dB(A) at night time. Day time is reckoned between 6 a.m to 10 p.m. and night time is reckoned between 10 p.m to 6	we are complying with the conditions.		

Sr.	Condition	Compliance	Annex	photo
	a.m. d) Industry should make efforts to bring down noise level due to D.G. set, outside industrial premises, within ambient noise requirements by proper sitting and control measures. e) A proper routine and preventive maintenance procedure for DG Set should be set and followed in consultations with the DG manufactured which would help to prevent noise levels of DG set from deteriorating with use. f) DG Set should be operated only in case of power failure. g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set. h) The applicant should comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.			
6)	Solid waste – The applicant should provide onsite municipal solid waste processing system & should comply with Municipal Solid Waste (Management & Handling) Rule, 2000 & E-Waste (M & H) Rules, 2011.	We have complied with condition		
7)	Affidavit undertaking in respect of no change in the status of consent conditions the draft can be downloaded from the official web site of the MPCB.	Being complied with		
8)	Applicant shall submit official e-mail address and any change will duly informed to the MPCB.	Being complied with		
9)	The treated sewage shall be disinfected using suitable disinfection method	Being complied with		
10)	The firm should submit to this office, the 30th day of September every year, the environment statement report for the finical year ending 31st march in the prescribed From-V as per the provision of the rule 14 of environmental (Protection) Second Amended rule 1992.	Being complied with. Environment statement report is attached herewith.		
11)	The Applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.	We agree with the condition		

Consent to Operate

Consent No. Format 1.0/BO/CAC-cell/Inward no.PN-26214&24652-15/1st CO(Part)/CAC-1805001807

Date: 30/05/2018

Consent to Operate is granted to **M/s. PSC Pacific, "Xion", S.No. 15/5, 15/6, 15/7, 15/8, 16, 17/1,17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune-411057**

Subject: 1st Consent to Operate (part-II) for Commercial Complex Project i.e Mall & Multiplex, hotel Shop in RED Category.

Ref:	1.	Consent to Establish granted vide No. BO/RO(P&P)/EIC No.PN-2305-08/E/CC-338 dated 01.08.2008
	2.	Environmental Clearance granted by MoEF Vide No. 21-777/2007-IA.III dated 04.03.2008
	3.	You application vide inward no.229 dated 27.01.2016
	4.	MPCB letter to Env. Dept letter dated BO/CAC-Cell/TB/M-50 dated 21.03.2017
	5.	Environment Department, GoM vide No. MIS-2017C.R.34/TC.1 dtd 31.05.2017
	6.	PP communication letter dated 20.04.2016 & 08.12.2016 and architects certificate dated 01.04.2016 & 11.04.2016 & PP Affidavit dated 01.12.2016
	7.	Minutes of Consent Appraisal Committee (CAC) meeting held on 12.12.2017
	8.	Revalidation of Consent to Establish granted vide No. Bo/CAC-Cell/PN-229-16/RevalidCE/CAC-1802000304 dated 8.02.2018

Your application valid No.PN-26214-15 dated 16.07.2015 for Mall & Multiplex, Hotel, Achor Shop PN-24652-15 dated 06.04.2015 for Hotel Activity, UAN-49819

For: 1st Consent to Operate (part-i).
Under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous and Other Wastes (Management and Transboundary movement) Rules, 2016 is considered and as detailed in the schedule I,II,III & IV annexed to this order:

1.	The 1st Consent to Operate (Part-I) is granted for a period upto 31.1.2020
2.	The captil investment of the project (part-I) is RS.194.47 Crs (As per C.A. Certificate submitted by project proponent i.e. Project cost of mall, multiplex and anchor shop is Rs.91 Cr and Hotel is 103.39cr)
3.	The 1st Consent to Operate (Part-I) is valid for Commercial Complex Project (Mall & Multiplex, Hotel, Achor Shop) of project named M/s. PSC Pacific "Xion", S.No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2/1, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune on total plot area of 31,451 Sq.mtrs and construction built up area of 28,511.03 sq. mtrs (Out of total construction BUA of 46,040 sq.mtrs as per Ec dated 04.03.2008) including utilities and services.

Sr.No	Consent to 1st Operate (part-I) valid for	Total Plot area Sq.Mtrs	Total Construction Area
1.	Hotel With restaurant, swimming pool & Laundry activity for 150 rooms	31,451	8575.03

2.	Mall, Multiplex, Achor Shop	31,451	19,936.00
Total construction completed area of the project (Part-I), as per architect dated 1.4.2016		31,451	28,511.03
Area details as per Environmental Clerence granted by MoEF vide No-21-777/2007-IA.III dated 4.3.2008		31,451	46,040
Total Construction area remaining part of the project		31,451	17,528.97

Condition of Consent

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>4.</td><td>Conditions under Water (P& CP), 1974 Act for discharge of effluent:
<table>
<tr><th>Sr. No.</th><th>Description</th><th>Permitted quantity of discharge (CMD)</th><th>Standards to be achieved</th><th>Disposal</th></tr>
<tr><td>1.</td><td>Trade effluent</td><td>NIL</td><td>NA</td><td>NA</td></tr>
<tr><td>2.</td><td>Domestic effluent</td><td>195</td><td>As per Schedule I</td><td>The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower makeup, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body.</td></tr>
</table></td><td>The waste water is being treated in STP. The treated wastewater from STP is being used for Gardening and flushing purpose.</td><td></td><td></td></tr>
<tr><td>5.</td><td>Condition under Air (P& CP) Act, 1981 for air emissions:
<table>
<tr><th>Sr. No.</th><th>Description of stack/source</th><th>Number of stack</th><th>Standards to be achieved</th></tr>
<tr><td>1.</td><td>DG set (750 KVA x 4 Nos)</td><td>4</td><td>As per Schedule -II</td></tr>
<tr><td>2.</td><td>DG set (385 KVA)</td><td>1</td><td>As per Schedule -II</td></tr>
<tr><td>3.</td><td>DG Set (200 KVA)</td><td>1</td><td>As per Schedule -II</td></tr>
</table></td><td>Being complied with.</td><td></td><td>✓</td></tr>
<tr><td>6.</td><td>Conditions under Municipal Solid Waste (Management and Handling) Rule, 2000:
<table>
<tr><th>Sr. No.</th><th>Types of Waste</th><th>Quantity</th><th>Treatment</th><th>Disposal</th></tr>
<tr><td>1.</td><td>biodegradable</td><td>670 kg/day</td><td>OWC Provided</td><td>Used as Manure</td></tr>
<tr><td>2.</td><td>Non-Biodegradable</td><td>360 kg/day</td><td>---</td><td>Segregate and Hand over to Local Body for recycling</td></tr>
<tr><td>3.</td><td>STP sludge</td><td>As per generatio</td><td>---</td><td>Used as Manure</td></tr>
</table></td><td>Solid waste generated onsite is segregated and disposed off in bins. Organic waste is Composted.</td><td></td><td></td></tr>
</table>

Sr.	Condition	Compliance	Annex	photo
	n			
7.	Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for treatment and disposal of hazardous waste Sr. No. | Type of Waste | Quantity | UOM | Treatment | Disposal NIL	Being complied with.		
8.	The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.	We agree with the condition.		
9.	This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.	We agree with the condition.		
10.	PP shall submit an affidavit in prescribed format regarding compliance of conditions of EC and Consent to Establish condition.	We agree with the condition.		
11.	PP shall submit the affidavit within 15 days in the prescribed format regarding the part of the built up area/ building for which application for 1st Consent to Operate (Part) is made and that the same is include in the Environmental Clerence accorded.	We agree with the conditions		
12.	PP shall achieve the treated domestic effluent standard for the parameter BOD-10 mg/lit	We agree with the conditions		
13.	PP has submitted Certified from Architect regarding construction completed BUA dated 1.4.2016	We agree with the conditions		
14.	PP shall comply conditions stipulated in Environment Clearance issued by MoEF vide No. F.No. 21-777/2007-IA-III dtd 4.03.2008.	We agree with the conditions		

Fee Details:
Received consent fee of:

Sr. No.	DD No.	Bank Name	Amount	date
1.	133567	Axis Bank	1,25,000/-	8.7.2015
2.	131781	Axis Bank	2,06,783/-	24.2.2015
3.	7608751	HDFC Bank	7,77,560/-	26.4.2018

Copy to:

1) Regional Officer, MPCB Board, Pune and Sub Regional Officer, MPCB, Pune-2
   They are directed to ensure the compliance of the consent conditions.
2) Chief Accounts Officer, MPCB Board, Mumbai.
3) CC/CAC desk-for record & website updation purposes.

Schedule I

Teams and condition as for compliance of Water Pollution Control:

Sr.	Condition	Compliance	Annex	photo
1)	A) As per your application, you have provided 3 Nos. of Sewage treatment plants (STP)s of Capacity 450 CMD of MBBR Technology for Hotel 250 CMD, Mall, Multiplex and Anchor Shop 150 CMD and 50 CMD)	Being complied with. we have provided 3 nos of STPs having total capacity 400 KLD (Hotel-200 m3/day, Mall, Multiplex and Anchor Shops - 150 m3/day and 50 m3/day).		
2)	B) The applicant shall operate the effluent treatment plant (STP) to treat the sewage so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent. 01 BOD (3 days 27oC) 20 02 Total Suspended Solids (TSS) 50 03 COD 100 04 Residual Chlorine 1ppm	We are complying with the condition.		
	C) The treated effluent shall be 60% recycled for secondary purpose such as toilet flushing, Air conditions, cooling tower makeup, firefighting etc. Remaining shall be connected to the swerage line system provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time. Project Proponent shall archive the treated domestic effluent standards for the parameter BOD-10 mg/lit and SRO has submitted verification report dated 7.3.2018 for the installation of online monitoring system parameters flow, BOD, and TSS at STP outlet.	We agree with the condition		
3)	The Boards reserved its rights to review plans, specification or other data relating to plant setup for the treatment of waterworks for the purification thereof &the system for the disposal of sewage or tread effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition	We agree with the condition		

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td></td><td>thereto.</td><td></td><td></td><td></td></tr>
<tr><td>4)</td><td>The industry should ensure the replacement of pollution control system or its parts after expiry of its expected life as defined by manufactured so as to ensure the compliance of standers and safety of the operation thereof.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>5)</td><td>Water Consumption details
<table>
<tr><th>Sr.No</th><th>Purpose of water consumed</th><th>Water consumption Quantity</th></tr>
<tr><td>1.</td><td>Industrial Colling, spraying in mine pits or boiler feed</td><td>0.00</td></tr>
<tr><td>2.</td><td>Domestic Purpose</td><td>295</td></tr>
<tr><td>3.</td><td>Processing whereby water gets polluted & pollutants are easily biodegradable</td><td>0.00</td></tr>
<tr><td>4.</td><td>Processing whereby water gets polluted & pollutants are not easily biodegradable and toxic.</td><td>0.00</td></tr>
</table></td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

Schedule II

Teams and condition as for compliance of Air Pollution Control:

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>1)</td><td>A) As per your application, you have proposed to installed the Air pollution control (APC) system and also erected following stack (s) and to observed the following fuel patterns:-
<table>
<tr><th>Sr.No</th><th>Satck Attached to</th><th>ASP System</th><th>Hight in Mtrs</th><th>Type of fuel</th><th>Quantity and UoM</th></tr>
<tr><td>01.</td><td>DG Sets (750 KVA X2)</td><td>Acoustic Enclosure</td><td>5.5*</td><td>Diesel</td><td rowspan="3">@ 0.21 Liters/hr/KVA at full load</td></tr>
<tr><td>02.</td><td>DG Set (385 KVA X 2)</td><td>Acoustic Enclosure</td><td>4.0*</td><td>Diesel</td></tr>
<tr><td>03</td><td>DG Set (200 KVA)</td><td>Acoustic Enclosure</td><td>4.0*</td><td>Diesel</td></tr>
</table>
*Above roof of the building in which it is installed.</td><td>We have complied with the condition.</td><td></td><td></td></tr>
<tr><td>2)</td><td>The applicant shall operate and maintain above maintained air pollution control system, so as to achieve the level of pollutants to the following standards
<table>
<tr><td>Particular matter</td><td>Not Exceed</td><td>150 mg/Nm^3</td></tr>
</table></td><td>We complying with the condition.</td><td></td><td></td></tr>
<tr><td>3)</td><td>The applicant shall obtain necessary prior permission for providing additional control equipment with necessary specification and operation thereof alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>4)</td><td>The Boards reserved its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary.</td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

Schedule III
Details of Bank Guarantees

Project Proponent shall extend the Bank Guarantees as below:

<table>
<tr><th>Sr.</th><th>Condition</th><th>Compliance</th><th>Annex</th><th>photo</th></tr>
<tr><td>1.</td><td>
<table>
<tr><th>Sr. No</th><th>Consent (renewal of C to O)</th><th>Amt of BG Imposed</th><th>Submission Period **</th><th>Purpose of BG#</th><th>Compliance Period</th><th>Validity</th></tr>
<tr><td>1</td><td>Consent to 1st Operate (Part)</td><td>PP shall extend/ Top up BG of Rs. 25 Lakh*</td><td>Within 15 days</td><td>Towards O & M Pollution control System</td><td>31.1.2020</td><td>30.4.2020</td></tr>
</table>
</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>2.</td><td>The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional officer within 15 days of the date of issue of Consent.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>3.</td><td>The Bank Guarantee(s) shall be valid for a period upto: Validity of consent + 4 months.</td><td>We agree with the condition</td><td></td><td></td></tr>
<tr><td>4</td><td>Existing BG obtained for above purpose if any may be extended for period of validity as above.</td><td>We agree with the condition</td><td></td><td></td></tr>
</table>

General Condition :

Sr.	Condition	Compliance	Annex	photo
1)	The applicant should provide facility for collection of samples of sewage effluents, air emission and hazardous waste to the Board staff at the terminal or designated points and should pay to the Board for the services rendered in this behalf.	We complied with the condition.		
2)	The firm should strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and environmental protection Act 1986 and Municipal Solid Waste (Management & Handling) Rules 2000, Noise (Pollution Control) Rules,2000 and E-Waste(Management & Handling) Rules, 2011.	We agree with the condition.		
3)	Drainage system should be provided for collection of sewage effluents. Terminal manholes should be provided at the end of the collection system with arrangement for measuring the flow, no sewage should be admitted in the pipes/sewers downstream of the terminal manholes. No sewage should find its way other than designed and provided collection system.	Being complied with.		
4)	Vehicles hired for brining construction material to the site should be in good conditions. And should conform to applicable air and noise emission standards and should be operate only during non-peak hours.	We have complied with the condition.		
5)	Condition under DG Set a) Noise from the D.G. Set should be controlled by providing an acoustics enclosure or by treating the room acoustically. b) Industry should be provided acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) should also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure room and then average. c) The industry should take adequate measures for control of noise levels from its own sources within the premises its respect of noise to less than 55 dB(A)	we are complying with the conditions.		

Sr.	Condition	Compliance	Annex	photo
	during day time and 45 dB(A) at night time. Day time is reckoned between 6 a.m to 10 p.m. and night time is reckoned between 10 p.m to 6 a.m. d) Industry should make efforts to bring down noise level due to D.G. set, outside industrial premises, within ambient noise requirements by proper sitting and control measures. e) A proper routine and preventive maintenance procedure for DG Set should be set and followed in consultations with the DG manufactured which would help to prevent noise levels of DG set from deteriorating with use. f) DG Set should be operated only in case of power failure. g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set. h) The applicant should comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.			
6)	Solid waste – The applicant should provide onsite municipal solid waste processing system & should comply with Municipal Solid Waste (Management & Handling) Rule, 2000 & E-Waste (M & H) Rules, 2011.	We have complied with condition		
7)	Affidavit undertaking in respect of no change in the status of consent conditions the draft can be downloaded from the official web site of the MPCB.	Being complied with		
8)	Applicant shall submit official e-mail address and any change will duly informed to the MPCB.	Being complied with		
9)	The treated sewage shall be disinfected using suitable disinfection method	Being complied with		
10)	The firm should submit to this office, the 30th day of September every year, the environment statement report for the finical year ending 31st march in the prescribed From-V as per the provision of the rule 14 of environmental (Protection) Second Amended rule 1992.	Being complied with. Environment statement report is attached herewith.		
11)	The Applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before	We agree with the		

Sr.	Condition	Compliance	Annex	photo
	commissioning of the project.	condition		

Annexure I
Previous Compliance Report Submitted Copy

PSC PACIFIC

PSC HOUSE, F.P.NO. 52/1 +52/2, CTS No.111+111/2, ERANDWANA, DR. KETKAR ROAD, PUNE-411004. PH.No.25462128/25469886

16th June 2018

To,
The Director
Regional Office (West Central Zone),
Ministry of Environment, Forest and Climate Change,
Ground Floor, East wing,
New Secretariat Building,
Civil lane, Nagpur-440001

Subject: **Half-yearly Compliance Report:** December to May 2018

Project: Residential project "Xion" at Hinjewadi, District Pune by PSC PACIFIC.

EC No. F. No. 21-777/2007-IA.III, dated 4th March, 2008

Dear Sir,

We are submitting half-yearly Compliance Report (hard & soft copy) in respect of the stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,
Yours faithfully,
For Paranjape Scheme (Construction) Ltd

Nidhi Despande
Project Proponent

Enclosure:
1. A hard copy of the compliance and monitoring report
2. A CD containing the same report

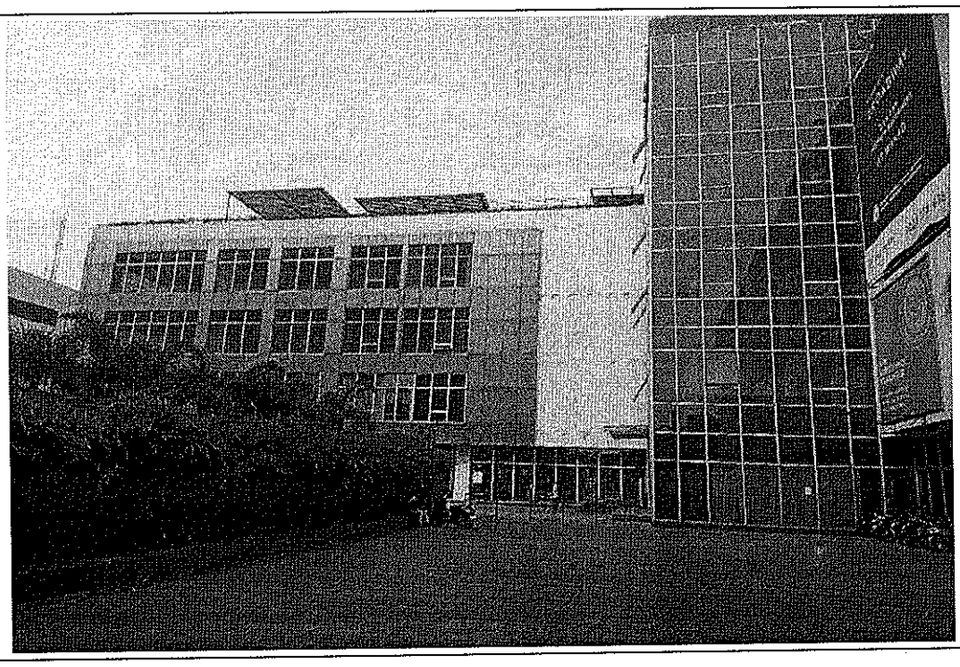
CC copy to:
1. Regional officer, Maharashtra Pollution Control Board, SRO - Pimpri Chinchwad
2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, ...
क्षेत्रीय कार्यालय (पश्चिम ...
Regional Office (Western ...
भूतल पूर्व खंड / Ground ...
नया सचिवालय भवन / New Secretariat Building
सिविल लाईन्स, Civil Lines
नागपुर / Nagpur-440 001
09/07/18

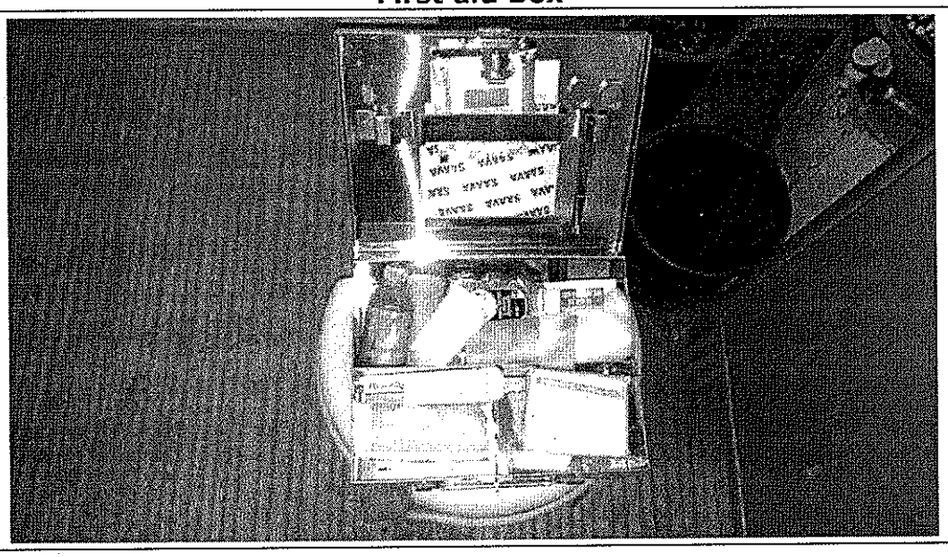
Annexure II
Site Photographs
(As per EC Condition: B(ii), xiii, xiv)

Completed Mall





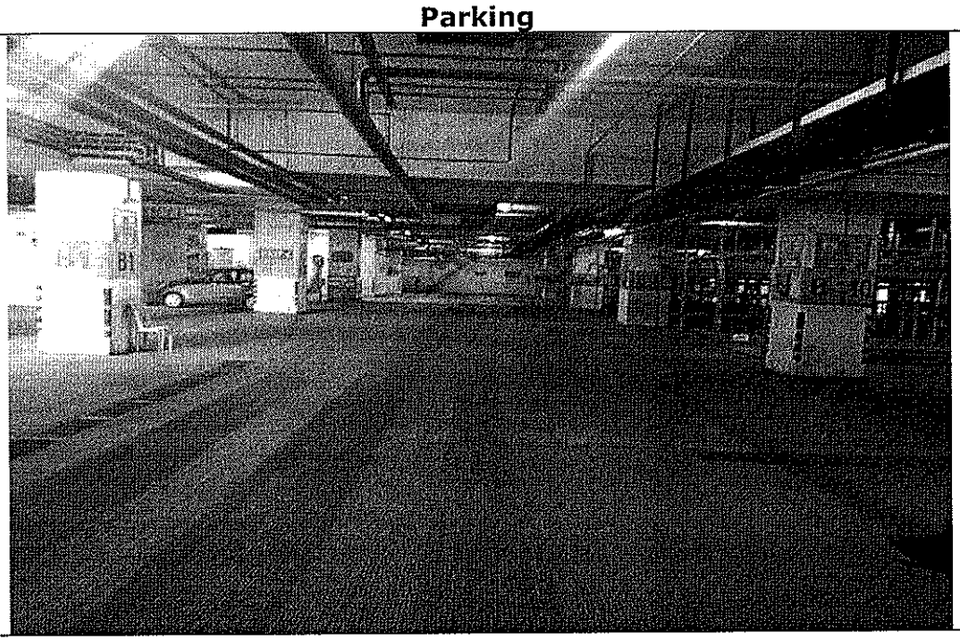
First aid Box



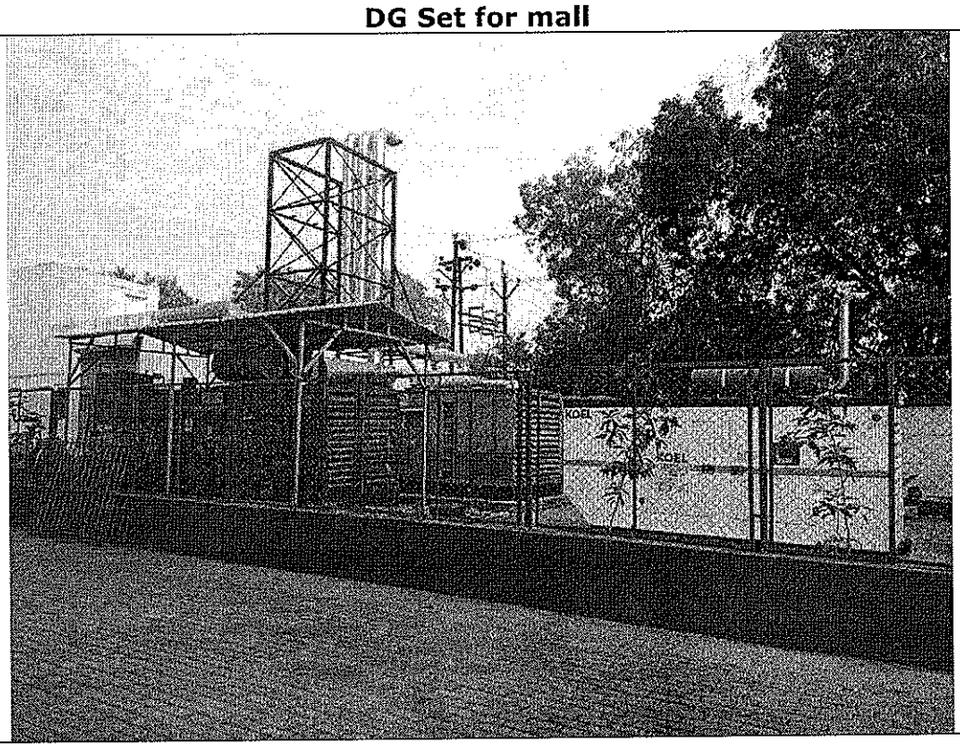
Safety Facility



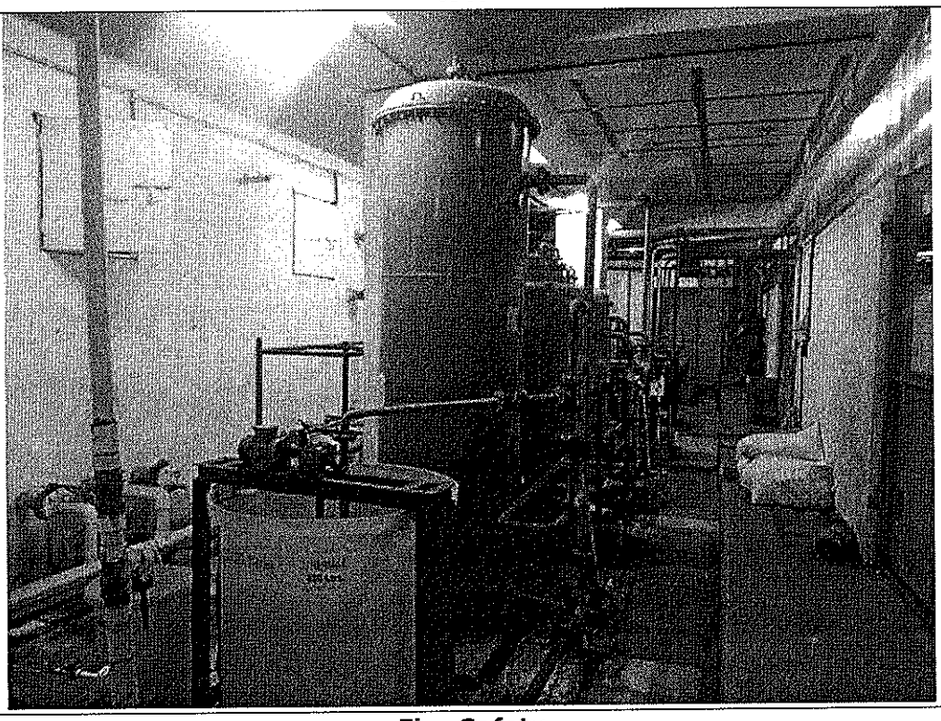
Parking



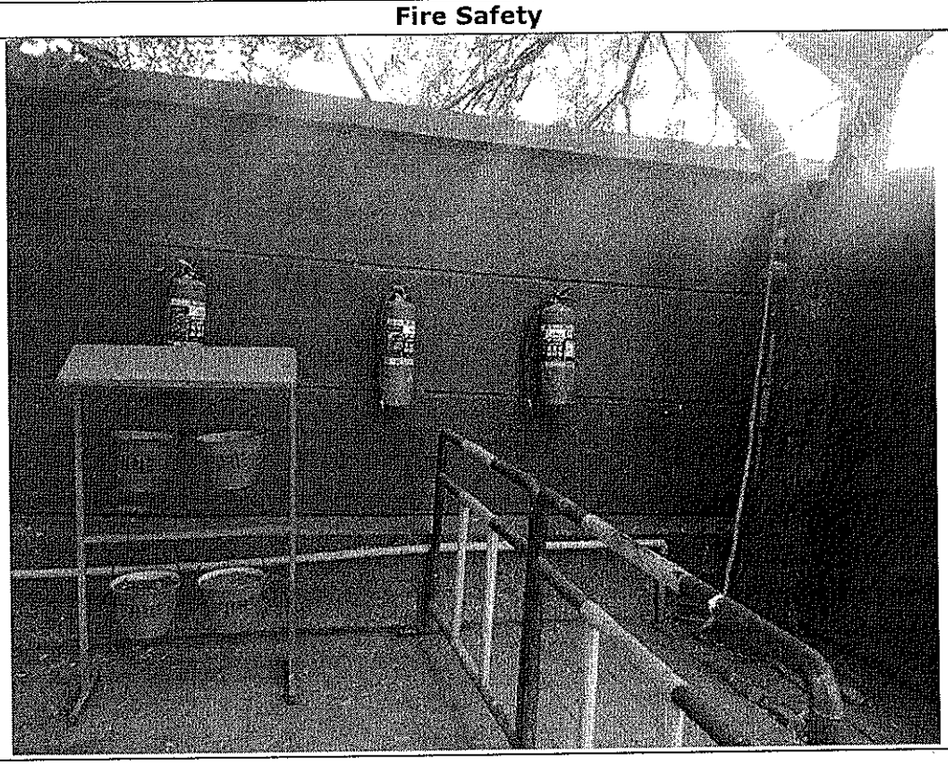
DG Set for mall



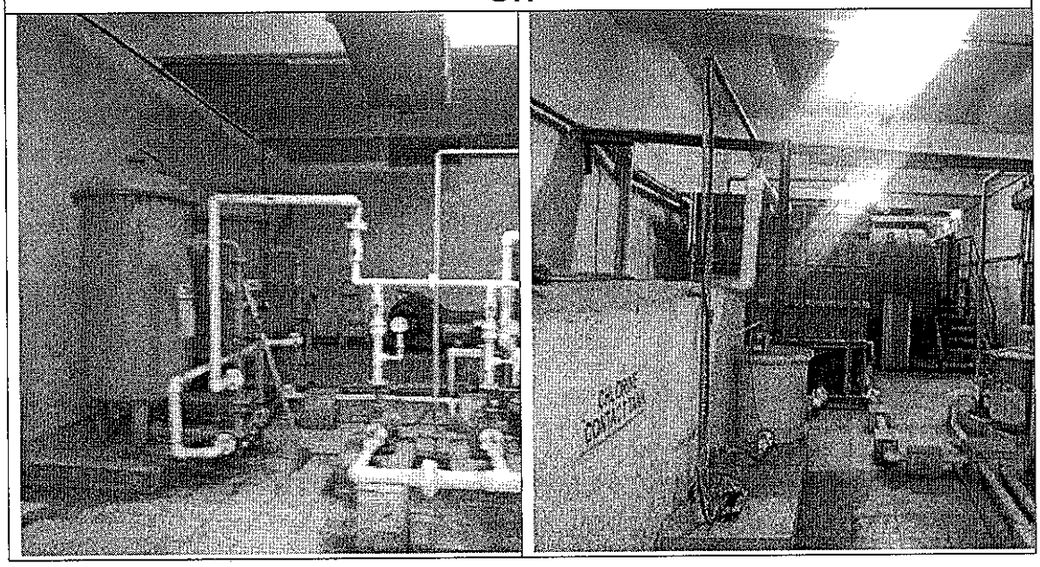
WTP



Fire Safety



STP



Annexure III
Monitoring Report
(As per EC Condition: Part B General Condition iii)

398722
397

Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0695-180615-SA-XION-PUNE			**Date:** 15.06.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	06.06.2018	**Date of Receipt of Sample**	07.06.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	07.06.2018	**Date of Completion of Analysis**	15.06.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5 km/h	W	58	48	34	25
Location	Main Gate			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.98	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	61	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Note:
1. The result listed refers only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory.

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

398723

Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0696-180615-SA-XION-PUNE			**Date:** 15.06.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	06.06.2018	**Date of Receipt of Sample**	07.06.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	07.06.2018	**Date of Completion of Analysis**	15.06.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5 km/h	W	58	48	34	25
Location	Near Mall Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.8	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	61	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Note:
1. The result listed refers only to the tested sample(s) and applicable parameter(s).
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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0697-180615-SA-XION-PUNE			**Date:** 15.06.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	06.06.2018	**Date of Receipt of Sample**	07.06.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	07.06.2018	**Date of Completion of Analysis**	15.06.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5 km/h	W	58	48	34	25
Location	Near Hotel Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	62	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	31	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN0698-180615-SA-XION-PUNE		**Date:** 15.06.2018
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	06.06.2018	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:10	63.8	61.4
2	Near Hotel	11:20	64.6	62.2
3	Near Parking	11:30	62.8	60.4
4	Near Anchor Bank	11:40	64.4	62.3
5	Near Mall	11:50	64.3	62.3

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN0699-180615-SA-XION-PUNE			**Date:** 15.06.2018
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NOx:25 mL X 1 No. PVC Bottle
Date of Sampling	06.06.2018	**Date of Receipt of Sample**	07.06.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	07.06.2018	**Date of Completion of Analysis**	15.06.2018

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	73	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	5.0	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	484.84	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	34	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.24	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	32	IS 11255 (Part 7): 2005
Remarks:			

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0700-180615-SA-XION-PUNE			**Date:** 15.06.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	06.06.2018	**Date of Receipt of Sample**	07.06.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	07.06.2018	**Date of Completion of Analysis**	15.06.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.5	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.3	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	89	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	47	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	66	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	14.6	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	18.6	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	1.78	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	12.4	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.32	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	<0.08	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0700 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
18	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
19	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
20	Zinc (as Zn)	mg/L	<0.01	APHA 23rd Ed. 2017, 3111-B, 3-20
21	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
22	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
23	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80

Remark: N.D.: Not Detected

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0593-180615-SA-XION-PUNE			**Date:** 15.06.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	06.06.2018	**Date of Receipt of Sample**	07.06.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	07.06.2018	**Date of Completion of Analysis**	15.06.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.9	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.3	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	336	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	189	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	214	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	72.2	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	43.1	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	12.8	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	64.5	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.68	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	0.56	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0593 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
1	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
2	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
3	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
4	Zinc (as Zn)	mg/L	0.46	APHA 23rd Ed. 2017, 3111-B, 3-20
5	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
6	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
7	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
8	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
9	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	<1.1	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D.: Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0802-180717-SA-XION-PUNE			**Date:** 17.07.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	12.07.2018	**Date of Receipt of Sample**	13.07.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	13.07.2018	**Date of Completion of Analysis**	17.07.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
6 km/h	W	89	77	25	23
Location	Main Gate			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	63	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0803-180717-SA-XION-PUNE			**Date:** 17.07.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	12.07.2018	**Date of Receipt of Sample**	13.07.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	13.07.2018	**Date of Completion of Analysis**	17.07.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
6 km/h	W	89	77	25	23
Location	Near Mall Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	58	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	26	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0804-180717-SA-XION-PUNE			**Date:** 17.07.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	12.07.2018	**Date of Receipt of Sample**	13.07.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	13.07.2018	**Date of Completion of Analysis**	17.07.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
6 km/h	W	89	77	25	23
Location	Near Hotel Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	6.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	59	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN0805-180717-SA-XION-PUNE		**Date:** 17.07.2018
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	12.07.2018	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:10	63.4	61.2
2	Near Hotel	11:20	64.2	61.7
3	Near Parking	11:30	63.9	61.6
4	Near Anchor Bank	11:40	63.5	60.7
5	Near Mall	11:50	62.9	60.1

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN0806-180717-SA-XION-PUNE			**Date:** 17.07.2018
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NOx:25 mL X 1 No. PVC Bottle
Date of Sampling	12.07.2018	**Date of Receipt of Sample**	13.07.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	13.07.2018	**Date of Completion of Analysis**	17.07.2018

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	75	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	4.8	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	464.63	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	32	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.16	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	35	IS 11255 (Part 7): 2005
Remarks:			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0807-180717-SA-XION-PUNE			**Date:** 17.07.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	12.07.2018	**Date of Receipt of Sample**	13.07.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	13.07.2018	**Date of Completion of Analysis**	17.07.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.4	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.4	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	87	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	49	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	66	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	15.2	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	19.3	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	1.89	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	11.8	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.34	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	<0.08	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0807 cont..

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
18	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
19	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
20	Zinc (as Zn)	mg/L	<0.01	APHA 23rd Ed. 2017, 3111-B, 3-20
21	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
22	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
23	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Coliforms	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D.: Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0808-180717-SA-XION-PUNE			**Date:** 17.07.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	12.07.2018	**Date of Receipt of Sample**	13.07.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	13.07.2018	**Date of Completion of Analysis**	17.07.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.8	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	334	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	187	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	221	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	73.4	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	39.2	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	13.4	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	64.5	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.65	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	0.54	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0808 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
1	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
2	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
3	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
4	Zinc (as Zn)	mg/L	0.049	APHA 23rd Ed. 2017, 3111-B, 3-20
5	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
6	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
7	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
8	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
9	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Coliforms	MPN/ 100 mL	<1.1	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D.: Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0907-180810-SA-XION-PUNE			**Date:** 10.08.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	03.08.2018	**Date of Receipt of Sample**	04.08.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	04.08.2018	**Date of Completion of Analysis**	10.08.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5 km/h	W	92.5	82.5	24	22
Location	Main Gate			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	15.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	62	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	31	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0908-180810-SA-XION-PUNE			**Date:** 10.08.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	03.08.2018	**Date of Receipt of Sample**	04.08.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	04.08.2018	**Date of Completion of Analysis**	10.08.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5 km/h	W	92.5	82.5	24	22
Location	Near Mall Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	62	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	27	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Ambient Air Quality Monitoring Report

Report No.: ME-PN0909-180810-SA-XION-PUNE			**Date:** 10.08.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	03.08.2018	**Date of Receipt of Sample**	04.08.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	04.08.2018	**Date of Completion of Analysis**	10.08.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
5 km/h	W	92.5	82.5	24	22
Location	Near Hotel Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	61	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	32	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN0910-180810-SA-XION-PUNE		**Date:** 10.08.2018
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	03.08.2018	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:10	63.4	61.2
2	Near Hotel	11:20	64.6	62.4
3	Near Parking	11:30	63.7	61.8
4	Near Anchor Bank	11:40	62.6	60.2
5	Near Mall	11:50	64.2	61.5

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN0911-180810-SA-XION-PUNE			**Date:** 10.08.2018
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NOx:25 mL X 1 No. PVC Bottle
Date of Sampling	03.08.2018	**Date of Receipt of Sample**	04.08.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	04.08.2018	**Date of Completion of Analysis**	10.08.2018

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	77	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	5.1	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	490.85	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	31	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.18	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	33	IS 11255 (Part 7): 2005
Remarks:			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0912-180810-SA-XION-PUNE			**Date:** 10.08.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	03.08.2018	**Date of Receipt of Sample**	04.08.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	04.08.2018	**Date of Completion of Analysis**	10.08.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.5	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.2	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	91	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	51	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	60	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	14.9	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	18.3	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	1.76	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	12.2	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.31	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	<0.08	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0912 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
18	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
19	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
20	Zinc (as Zn)	mg/L	<0.01	APHA 23rd Ed. 2017, 3111-B, 3-20
21	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
22	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
23	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Coliforms	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D.: Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0913-180810-SA-XION-PUNE			**Date:** 10.08.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** / Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	03.08.2018	**Date of Receipt of Sample**	04.08.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	04.08.2018	**Date of Completion of Analysis**	10.08.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.8	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	6.8	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	316	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	168	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	208	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	50.5	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	38.4	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	12.50	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	63.5	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.67	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	0.57	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0913 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
1	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
2	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
3	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
4	Zinc (as Zn)	mg/L	0.042	APHA 23rd Ed. 2017, 3111-B, 3-20
5	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
6	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
7	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
8	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
9	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Coliforms	MPN/ 100 mL	<1.1	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D.: Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0916-180920-SA-XION-PUNE			**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Main Gate	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
2.75 km/h	W	75	63	30	19
Location	Main Gate			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	64	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	28	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0917-180920-SA-XION-PUNE			**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Mall Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
2.75 km/h	W	75	63	30	19
Location	Near Mall Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	14.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	59	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	25	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-PN0918-180920-SA-XION-PUNE			**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Ambient Air Quality Monitoring	**Sample Collected by**	Laboratory
Sampling Location	Near Hotel Building	**Sample Quantity/Packing**	PM_{10}:Filter paper: 1 X 1 No. $PM_{2.5}$:Filter paper:1 X 1 No. SO_2:30 mL X 2 No. PVC Bottle NO_2:30 mL X 2 No. PVC Bottle
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Meteorological Data/ Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (^{0}C)	
		Max.	Min.	Max.	Min.
2.75 km/h	W	75	63	30	19
Location	Near Hotel Building			**Duration of Survey:** 08 hours	

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO_2)	$\mu g/m^3$	7.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO_2)	$\mu g/m^3$	13.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM_{10}	$\mu g/m^3$	63	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	$\mu g/m^3$	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30

Remarks: #- Standard for 24 h. monitoring except CO; 1 h. Standard in case of CO

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-PN0919-180920-SA-XION-PUNE		**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune	**Order Reference** Verbal discussion
Date of Sampling	11.09.2018	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	Main Gate	11:10	63.8	60.8
2	Near Hotel	11:20	64.5	62.1
3	Near Parking	11:30	62.6	60.4
4	Near Anchor Bank	11:40	64.3	61.8
5	Near Mall	11:50	63.4	61.2

Noise Level Standard

Area Code	Area Type	Limit in dB(A) weighted scale	
		Day	Night
B	Commercial	65	55

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-PN0920-180920-SA-XION-PUNE			**Date:** 20.09.2018
ame and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Stack Emission Monitoring	**Sample Collected by**	Laboratory
Sampling Location	D.G. I 62 KVA	**Sample Quantity/Packing**	Thimble:1 X 1 No. SO_2:30 mL X 1 No. PVC Bottle NO_X:25 mL X 1 No. PVC Bottle
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	As per method reference		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Stack Identity			D.G. I 62 KVA
Stack attached to			DG
Material of construction			M.S
Stack height above ground level (Meter)			1.5
Stack Diameter (Meter)			0.2
Stack shape at top			Round
Type of fuel			Diesel
Fuel Consumption (L/h)			10
Parameter	**Unit**	**Result**	**Method Reference**
Flue gas Temperature	^0C	73	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	4.9	IS 11255 (Part 3):2008
Total gas quantity	Nm^3/h	477.05	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm^3	29	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO_2)	kg/day	0.23	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen (NOx)	mg/Nm^3	35	IS 11255 (Part 7): 2005
Remarks:			

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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TECHNICAL MANAGER

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0921-180920-SA-XION-PUNE			**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water	**Sample Collected by**	Laboratory
Sampling Location	Construction Site	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	0.5	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.5	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	88	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	48	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	60	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	15.3	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	20.2	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	1.93	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	11.6	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.33	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	<0.08	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

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Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0921 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
17	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
18	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
19	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
20	Zinc (as Zn)	mg/L	<0.01	APHA 23rd Ed. 2017, 3111-B, 3-20
21	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
22	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
23	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
24	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
25	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D. : Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Note:
1. The result listed refers only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory

Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant, Environmental Monitoring Laboratory & Contractor
Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-PN0922-180920-SA-XION-PUNE			**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Verbal discussion
Sample Description/Type	Water (Bore Well)	**Sample Collected by**	Laboratory
Sampling Location	Bore Well	**Sample Quantity/Packing**	5 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500 mL X No. Sterilised Glass Bottle
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	IS:3025(Part I):1987 RA 2003; IS 1622:1981 RA 1996 Ed 2.4 (2003); APHA 23rd Ed. 2017, 1060-B, 1-40; 9060 A, 9-36		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 23rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	IS 3025 (Part 7):1984, Reaffirmed 2006
4	Turbidity	NTU	1.1	APHA 23rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.5	APHA 23rd Ed. 2017, 4500-H+-B, 4-95
6	Total Dissolved Solids	mg/L	342	IS 3025 (Part 16):1984, Reaffirmed 2006, Ed.2.1 (1999-12)
7	Alkalinity Total (as $CaCO_3$)	mg/L	184	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
8	Total Hardness (as $CaCO_3$)	mg/L	258	APHA 23rd Ed. 2017, 2340-C, 2-48
9	Chloride (as Cl)	mg/L	75.8	APHA 23rd Ed. 2017, 4500-Cl-B, 4-75
10	Sulphate (as SO_4)	mg/L	37.5	APHA 23rd Ed. 2017, 4500- SO4-E, 4-199
11	Nitrate (as NO_3)	mg/L	13.2	APHA 23rd Ed. 2017, 4500-NO3, E 4-131
12	Calcium (as Ca)	mg/L	65.2	APHA 23rd Ed. 2017, 3500-Ca-B, 3-69
13	Fluoride (as F)	mg/L	0.71	APHA 23rd Ed. 2017, 4500-F, D, 4-90
14	Iron (as Fe)	mg/L	0.55	APHA 23rd Ed. 2017, 3111-B, 3-20
15	Manganese (as Mn)	mg/L	<0.04	APHA 23rd Ed. 2017, 3111-B, 3-20
16	Cadmium (as Cd)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20

Mahabal Enviro Engineers Pvt. Ltd.

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Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,
Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111
Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Report No.0922 cont...

Sr. No.	Parameter	Unit	Result	Method Reference
1	Chromium Hexa (as Cr^{6+})	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
2	Copper (as Cu)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
3	Lead (as Pb)	mg/L	N.D.	APHA 23rd Ed. 2017, 3111-B, 3-20
4	Zinc (as Zn)	mg/L	0.51	APHA 23rd Ed. 2017, 3111-B, 3-20
5	Arsenic (as As)	mg/L	<0.01	APHA 23rd Ed. 2017, 3114-C, 3-40
6	Mercury (as Hg)	mg/L	N.D.	APHA 23rd Ed. 2017, 3114-C, 3-40
7	Cyanide (as CN)	mg/L	N.D.	APHA 23rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
8	Anionic detergents as MBAS	mg/L	N.D.	APHA 23rd Ed. 2017, 5540-C, 5-55
9	Phenolic compounds (as C_6H_5OH)	mg/L	N.D.	APHA 23rd Ed. 2017, 5530- B & C, 5-49, 5-50
Microbiological Analysis				
26	Total Colliforms	MPN/ 100 mL	<1.1	APHA 23rd Ed. 2017, 9221-B & C, 9-69, 9-72
27	E-Coli	MPN/ 100 mL	Absent	APHA 23rd Ed. 2017, 9221-B, C & G, 9-69, 9-72 & 9-80
Remark: N.D.: Not Detected				

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Mahabal Enviro Engineers Pvt. Ltd.

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Phone : 91-712-2612162 **T/Fax:** 91-712-2612212 **Email:** nagpur@mahabal.com

Soil Sample Analysis Report

Report No.:ME-PN0923-180920-SA-AB-PUNE			**Date:** 20.09.2018
Name and Address of Customer	**XION** Hinjewadi, Pune		**Order Reference** Telephonic Discussion
Sample Description/Type	Soil	**Sample Collected by**	Laboratory
Sampling Location	Project Site	**Sample Quantity/Packing**	1 kg X No. Polyethene bag
Date of Sampling	11.09.2018	**Date of Receipt of Sample**	12.09.2018
Sampling Procedure	Manual on Soil, Plant& Water Analysis		
Date of Start of Analysis	12.09.2018	**Date of Completion of Analysis**	20.09.2018

Sr. No.	Parameter	Unit	Result	Method Reference
1	pH	-	7.4	IS 2720 (Part 26) :1987, RA 2002
2	Moisture Content	%	3.6	IS 2720 (Part II): 1973, RA 2002, Ed. 3.1
3	Organic Carbon	%	0.53	WLII Sec. B7, Page No. 10
4	Available Nitrogen	mg/kg	99	APHA 22nd Ed. 2012
5	Oil & Grease	mg/kg	306	CPCB (HW) manual, Page No. 156
6	Cadmium	mg/kg	<2	USEPA method No. 200, 200.2
7	Total Chromium	mg/kg	12.6	USEPA method No. 200, 200.2
8	Copper	mg/kg	43.5	USEPA method No. 200, 200.2
9	Lead	mg/kg	13.5	USEPA method No. 200, 200.2
10	Zinc	mg/kg	85.3	USEPA method No. 200, 200.2
11	Sulphate	ppm	39.6	IS 2720 (Part XXVII):1977, RA 2001.
12	Chloride	mg/kg	152	USEPA / SW 846/ 9253
13	Phosphate	mg/kg	N.D.	WLII Sec.B10 A, Page No.16

Remarks: N.D. – Not Detected

----------END----------

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi
TECHNICAL MANAGER

Note:
1. The result listed refers only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory.

Annexure IV
Environmental Clearance Letter
(As per EC Condition)

COPY OF ENVIRONMENT CLEARANCE LETTER

By Speed Post

F.No. 21-777/2007-IA.III
Government of India
Ministry of Environment and Forests
(I.A. division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110510

Dated: 04.03.2008

To,

M/s PSC Pacific,
PSC House, CTS No.111+111/2,
Anand Colony,
Dr. Ketkar Road,
Pune 411004
Maharashtra

Subject: Environmental Clearance for proposed construction of commercial complex Xion- mixed use development at Hinjewadi, Pune, Maharashtra.

Dear Sir,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. Form 1 & 1 A, and Conceptual Plan and the additional clarifications furnished in response to the observations of the Additional Expert Appraisal Committee constituted by the competent authority in its 24th meeting held on Nobermber 22-24, 2007.

2. The project proponent is proposing for construction of commercial complex ?Xion?- mixed use development at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hingewadi, Pune, Maharashta at a cost of Rs. 75 crore. The proposed project comprises construction of Mall & Multiplex, Hotel and Achor shop. Total plot area is 31,451 sq. m. The total built up area as indicated is 46,040.96 sq. m. Total water requirement will be 209 cu.m./day and total waste water generation from the project will be 178 cu. m./day. The sewage generated in the complex will be treated in STP having treatment capacity of 310 cu.m./d. The treated waste water will be re-used for flushing, gardening and cooling in the complex and unused waste

water will be disposed of in public sewer. The total solid waste generated will be 1030 kg/day. The biodegradable waste will be composted and non-biodegradable waste will be sent for recycling. Total parking space proposed for parking of cars is 504.

3. The EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the EMP and other stipulated conditions. Accordingly, the Ministry hereby accords necessary environmental clearance for the project under category 8 (a) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

PART A- SPECIFIC CONDITIONS

I. Construction Phase

i. Vehicles hired for construction activities should be operated only during non-peak hours.

ii. All the top soil excavated during construction activities should be stored for use in horticulture/landscape developments within the project site.

iii. Ready mixed concrete shall be used in building construction.

iv. Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.

v. Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction/operation of the project.

vi. Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

vii. Use of glass may be reduced upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.

viii. Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.

ix. Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.

x. Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.

xi. All required sanitary and hygienic measures including portable toilets/septic tank etc. for labour should be in place before starting construction activities and to be maintained throughout the construction phase.

xii. Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.

xiii. A First Aid Room will be provided at the project site both during construction and operation of the project.

xiv. Adequate drinking water facility should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.

xv. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and be disposed off taking the necessary precautions for general safety and health aspects of people.

xvi. Diesel power generating sets used during construction phase should be of ?enclosed type? to prevent noise and should conform to rules made under Environment (Protection) Act 1986, prescribed for air and noise emission standards.

xvii. Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.

xviii. The construction agencies shall use flyash based material/ products as per the provisions of fly ash notification of 14.9.1999 and as amended on 27.8.2003.

xix. Vehicles hired for bringing construction material at site should be in good condition and should have valid ?pollution under check?(PUC) certificate and to conform to applicable air and noise emission standards and should be operated only during non-peaking hours.

xx. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they should not leach into the ground water.

xxi. Any hazardous waste generated during construction phase should be disposed of as per applicable Rules & norms with necessary approvals of the State Pollution Control Board.

xxii. Under the provisions of the Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it was

found that construction of the project had started without obtaining environmental clearance.

xxiii. The diesel required for operating DG Set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosives shall be taken.

xxiv. The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act from the Competent Authority shall be taken.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.

II. Operation Phase

The environmental clearance recommended to the project is subject to the specific conditions as follows:

i. Diesel power generating sets proposed as source of back up power for lifts, common area illumination and for domestic use should be of ?enclosed type? and conform to rules made under The Environment (Protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.

ii. Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex.

iii. Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.

iv. The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent shall be re-cycled to the maximum extent possible. In case treated effluent is to be discharged separately during monsoon period consent of State Pollution Control Board shall be taken.

v. Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.

vi. For disinfection of waste water ultra violet radiation shall be used in place of chlorination.

vii. Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be

removed in a settling tank before its utilization for rainwater harvesting.

viii. The solid waste generated should be properly collected & segregated. Wet garbage (biodegradable) should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.

ix. The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.

x. The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.

xi. A Report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the Ministry in three months time.

xii. The values of R & U for the building envelope should meet the requirements of the hot & humid climatic location. Details of the building envelope should be worked out and furnished in three months time.

xiii. Energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoid Mercury contamination. Use of solar panels may be done to the extent possible.

xiv. The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the premises.

xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.

PART B. GENERAL CONDITIONS

i) The environmental safeguards contained in the documents should be implemented in letter and spirit.

ii) Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.

iii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

4. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents

during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

7. Necessary permission shall be obtained from the State Fire Department for providing fire safety measures before occupying/ handing over the premises to the owners/ allotees. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.

8. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

9. The project proponent shall enter in to MOU with all buyers of the property to ensure operation and maintenance of the assets of the complex.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Secretary, Department of Environment, Government of Maharashtra, New Administrative Building, 15th Floor, Opp. Mantralaya, Mumbai.
2. The Member Secretary, Maharashtra State Pollution Control Board, Kalptaru Point, 3rd Floor, Near Sion Circle Opp. Cine Planet Cinema, Sion(E), Mumbai.
3. The CCF, Regional Office, Ministry of Envi ronment & Forests, Bhopal.
4. IA - Division, MOEF, New Delhi - 110001.
5. Guard file.

(K.C. RATHORE)
Additional Director (IA)

Annexure V
Consent to Establish Letter

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/ 24010437
Fax: 24023516
Website: http://mpcb.gov.in
E-mail: cac-cell@mpcb.gov.in

Kalpataru Point, 2nd - 4th Floor
Opp. Cine Planet Cinema,
Near Sion Circle, Sion (E)
Mumbai-400 022.

1802000304

Consent order No: - Format1.0/BO/CAC-cell/Inward no.PN-229-16/Revalid CE/CAC- *Date-* 08/02/2018

To,
M/s. PSC Pacific
"Xion", CTS No. 15/5, 15/6, 15/7,
15/8,16,17/1,17/2/1,17/2/2,
17/3,18/1,18/2, Hinjewadi, Pune

Subject: Revalidation of Consent to Establish for Commercial Complex Project (Mall & Multiplex, Hotel, Shop) in RED Category.

Ref : 1. Consent to Establish granted vide No. BO/RO(P&P)/EIC No.PN-2305-08/E/CC-338 dated 1.08.2008.
2. Environmental Clearance granted by MoEF Vide No.21-777/2007-IA.III dated 4.3.2008.
3. You application vide inward no.229 dated 27.1.2016.
4. MPCB letter to Env.Dept letter dated BO/CAC-Cell/TB/M-50 dated 21.3.2017.
5. Environment Department, GoM vide No.MIS-2017/C.R.34/TC.1 dtd. 31.5.2017.
6. PP communication letter dated 20.4.2016& 8.12.2016 and architect's certificate dated 1.4.2016 &11.4.2016 & PP Affidavit dated 1.12.2016.
7. Minutes of Consent Appraisal Committee (CAC) meeting held on 12.12.2017.

Your application vide inward No.229 dated 27.1.2016.

For: Revalidation of Consent to Establish.
under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. **The revalidation of consent to establish is granted for a period upto commissioning of the unit or upto 31.7.2018 whichever is earlier.**

2. The proposed capital investment of the project is Rs.194.47 Crs (CAs per C.A. Certificate submitted by project proponent).

3. **The Revalidation of Consent to Establish is valid for Commercial Complex Project (Mall & Multiplex, Hotel, Achor Shop) named as M/s. PSC Pacific "Xion", CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2/1, 17/2/2,17/3,18/1,18/2, Hinjewadi, Pune on total plot area of 31,451 sq. mtrs and total construction built up area of 46,040.96 sq. mtrs including utilities and services as per commencement certificate issued by local body.**

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr. no.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1.	Trade effluent	NIL	NA	NA

2.	Domestic effluent	251	As per Schedule –I	The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body.

5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sr. No.	Description of stack/ source	Number Of Stack	Standards to be achieved
1	DG set (750 KVA x4 Nos)	4	As Per Schedule -II
2	DG set (385 KVA)	1	As Per Schedule -II

6. Conditions under Municipal Solid Waste (Management and Handling) Rule, 2000 :

Sr. no	Type Of Waste	Quantity	Treatment	Disposal
1	Biodegradable	103.0 Kg/day	OWC	Used as Manure
2	Non-Biodegradable	154.0 Kg/day	---	Segregate and Hand over to Local Body for recycling
3	STP Sludge	4.0 Kg/day	---	Used as a Manure

7. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for treatment and disposal of hazardous waste

Sr. No.	Type Of Waste	Quantity	UOM	Treatment	Disposal
NIL					

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
10. PP shall submit an affidavit in prescribed format regarding compliance of conditions of EC and Consent to Establish condition.
11. PP shall achieve the treated domestic effluent standard for the parameter BOD- 10 mg/lit.
12. The treated effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening.
13. PP shall install online monitoring system for BOD, TSS and flow at the outlet of STP.
14. PP shall comply conditions stipulated in Environment Clearance issued by MoEF vide No. F.No.21-777/2007-IA.III dtd. 4.03.2008.
15. **This consent is issued as per Environment Dep, GoM letter vide no.MIS-2017/C.R.34/T.C.1 dated 31st May,2017 in which authority has submitted clarification stating that if construction is completed within the validity of EC, then no fresh EC or extension to EC is required**
16. **This consent is issued as per evidences submitted by PP vide communication letter dated 20.4.2016 & 8.12.2016 and architect's certificate dated 1.4.2016 &11.4.2016 & PP Affidavit dated 1.12.2016**

For and on behalf of the
Maharashtra Pollution Control Board

(Dr. P. Anbalagan, IAS)
Member Secretary

Received Consent fee of –

Sr. No.	DD No	Bank Name	Amount	date
1	1A2523	HDFC Bank	3,00,000/-	21.1.2016
2	000000001369	HDFC Bank	75,000/-	31.1.2016

Copy to:

1. Regional Officer, MPCB,Pune and Sub-Regional Officer, MPCB, Pune-2
   -- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Mumbai.
3. CC/CAC desk- for record & website updation purposes.

Maharashtra Pollution Control Board

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

1) A] As per your application, you have provided Sewage Treatment Plants (STP) of capacity 200 CMD of MBBR Technology

2) B] The Applicant shall operate the effluent treatment plant (STP) to treat the sewage so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

Sr.No.	Parameters	Standards prescribed by Board
		Limiting Concentration in mg/l, except for pH
01	pH	6.5 to 9
02	BOD (3 days 27oC)	20
03	Total Suspended Solids(TSS)	50
04	COD	100
05	Residual Chlorine	1 ppm
06	Detergent	2
07	Fecal Coliform(FC)	<1000

C] The treated effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be connected to the sewerage system provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time. Project Proponent shall achieve the treated domestic effluent standard for the parameter BOD- 10 mg/lit within six months period and shall install online monitoring system within three month.

3) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.
4) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5) In case, the water consumption of the project is not covered under the water consumption of local body, in that situation, the project proponent shall submit the CESS Returns in the prescribed format given under the provision of Water (Prevention & Control of Pollution) Cess Act, 1977 and Rules made there under for various category of water consumption.

In case the water consumption is duly assessed under the quantity of water consumption of local body, the project proponent shall submit certificate to that effect from the concern local body with the request not to assess CESS on their water consumption, being already assessed on the water consumption of local body.

Sr. no.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	381
2.	Domestic purpose	0.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00

Schedule-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have proposed to installed the Air pollution control (APC) system and also erected following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.	Type of Fuel	Quantity & UoM	S Kg/Day	SO2 Kg/Day
01.	DG set (750 KVA x4)	Acoustic Enclosure	5.5*	Diesel	3600 Kg/Day	36	72
02.	DG set (385 KVA)	Acoustic Enclosure	4.0*	Diesel			

* Above roof of the building in which it is installed.

2. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards.

Particulate matter	Not to exceed	150 mg/Nm^3

3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.

4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

Maharashtra Pollution Control Board

Schedule-III
Details of Bank Guarantees

Project Proponent shall extend the Bank Guarantee as below:

Sr. No.	Consent (Renewal of C to O)	Amt of BG Imposed	Submission Period**	Purpose of BG #	Compliance Period	Validity
1	Revalidation of C to E	Rs. 25 Lakh*	within 15 Days	Towards compliance of EC and C to E Condition.	Continuous	29.7.2022

* The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional Office within 15 days of the date of issue of Consent.

++ The Bank Guarantee(s) shall be valid for a period upto: Validity of consent + 4 months

Existing BG obtained for above purpose if any may be extended for period of validity as above.

Maharashtra Pollution Control Board

Schedule-IV

Conditions during construction phase:

a	During construction phase, applicant shall provide temporary sewage disposal and MSW facility for staff and worker quarters.
b	During construction phase, the ambient air and noise quality should be closely monitored to achieve Ambient Air Quality Standards and Noise by the project proponent through MoEF approved laboratory.
c	Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

General Conditions:

1) The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2) The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act 1986 and Municipal Solid Waste (Management & Handling) Rule 2000, Noise (Pollution and Control) Rules, 2000 and E-Waste (Management & Handling Rule 2011.
3) Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.
4) Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
5) Conditions for D.G. Set
   a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
   b) Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
   c) Applicant should make efforts to bring down noise level due to DG set, outside their premises, within ambient noise requirements by proper sitting and control measures.
   d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
   e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
   f) D.G. Set shall be operated only in case of power failure.
   g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
   h) The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.
6) Solid Waste – The applicant shall provide onsite municipal solid waste processing system & shall comply with Municipal Solid Waste (Management & Handling) Rule 2000 & E-Waste (M & H) Rule 2011.
7) Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.

8) Applicant shall submit official e-mail address and any change will be duly informed to the MPCB.
9) The treated sewage shall be disinfected using suitable disinfection method.
10) The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.
11) **The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.**

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Maharashtra Pollution Control Board

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Annexure VI
Consent to Operate Letter

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/ 24010437
Fax: 24023516
Website: http://mpcb.gov.in
E-mail: cac-cell@mpcb.gov.in

Kalpataru Point, 2nd - 4th Floor
Opp. Cine Planet Cinema,
Near Sion Circle, Sion (E)
Mumbai-400 022.

*Consent order No: - Format1.0/BO/CAC-cell/Inward no.PN-26214&24652-15/1st CO(Part)/CAC-*1805001807

Date- 30/05/2018

To,
M/s. PSC Pacific
"Xion", S. No. 15/5, 15/6, 15/7,
15/8,16,17/1,17/2/1,17/2/2,
17/3,18/1,18/2, Hinjewadi, Pune.

Subject: 1st Consent to Operate (part-I) for Commercial Complex Project ie.Mall & Multiplex, Hotel, Shop in RED Category.

Ref : 1. Consent to Establish granted vide No. BO/RO(P&P)/EIC No.PN-2305-08/E/CC-338 dated 1.08.2008.
2. Environmental Clearance granted by MoEF Vide No.21-777/2007-IA.III dated 4.3.2008.
3. You application vide inward no.229 dated 27.1.2016.
4. MPCB letter to Env.Dept letter dated BO/CAC-Cell/TB/M-50 dated 21.3.2017.
5. Environment Department, GoM vide No.MIS-2017/C.R.34/TC.1 dtd. 31.5.2017.
6. PP communication letter dated 20.4.2016& 8.12.2016 and architect's certificate dated 1.4.2016 &11.4.2016 & PP Affidavit dated 1.12.2016.
7. Minutes of Consent Appraisal Committee (CAC) meeting held on 12.12.2017.
8. Revalidation of Consent to Establish granted vide No. BO/CAC-Cell/PN-229-16/RevalidCE/CAC-1802000304 dated 8.02.2018.

Your application vide No.PN-26214-15 dated 16.7.2015 for Mall & Multiplex, Hotel, Achor Shop
PN-24652-15 dated 6. 4.2015 for Hotel activity. UAN-49819

For: 1st Consent to Operate (part-I)

under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. The 1st Consent to Operate (Part-I) is granted for a period upto **31.1.2020**.

2. The capital investment of the project (Part-I) is **Rs.194.47 Crs** (As per C.A. Certificate submitted by project proponent ie. Project cost of Mall, Multiplex and Anchor shop is Rs.91.08 Cr and Hotel is Rs. 103.39Cr).

3. The 1st Consent to Operate(part-I) is valid for Commercial Complex Project (Mall & Multiplex, Hotel, Achor Shop) of project named as **M/s. PSC Pacific "Xion"**, S. No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2/1, 17/2/2,17/3,18/1,18/2, Hinjewadi, Pune on total plot area of 31,451 sq. mtrs and construction built up area of 28,511.03 sq. mtrs (Out of total construction BUA of 46,040 sq. mtrs. as per EC dated 04.03.2008) including utilities and services.

Sr. no.	Consent to 1st Operate (part-I) valid for	Total Plot area Sq.Mtrs	Total Construction BUA Sq.Mtrs
1.	Hotel with restaurant, swimming pool & laundry activity for 150 Rooms	31,451	8575.03
2.	Mall, Multiplex, Achor Shop	31,451	19,936.00
Total construction completed area of the project (Part-I), as per architect certificate dated 1.4.2016		31,451	28,511.03
Area details as per Environmental Clearance granted by MoEF Vide No.21-777/2007-IA.III dated 4.3.2008.		31,451	46,040
Total Construction remaining part of the Project		31,451	17,528.97

4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:

Sr. no.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1.	Trade effluent	NIL	NA	NA
2.	Domestic effluent	195	As per Schedule –I	The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body.

5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sr. No.	Description of stack/ source	Number Of Stack	Standards to be achieved
1	DG set (750 KVA x4 Nos)	4	As Per Schedule -II
2	DG set (385 KVA)	1	As Per Schedule -II
3	DG set (200 KVA)	1	As Per Schedule -II

6. Conditions under Municipal Solid Waste (Management and Handling) Rule, 2000 :

Sr. no.	Type Of Waste	Quantity	Treatment	Disposal
1	Biodegradable	670 Kg/day	OWC provided	Used as Manure
2	Non-Biodegradable	360 Kg/day	---	Segregate and Hand over to Local Body for recycling
3	STP Sludge	As per generation	---	Used as a Manure

7. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for treatment and disposal of hazardous waste

Sr. No.	Type Of Waste	Quantity	UOM	Treatment	Disposal
NIL					

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities
10. PP shall submit affidavit an affidavit in Board's prescribed format within 15 days regarding compliance of conditions of Environmental Clearance (EC) and Consent to Establish.

11. PP shall submit the affidavit within 15 days in the prescribed format regarding the part of the built up area/ building for which application for 1st Consent to Operate (Part) is made and that the same is included in the Environmental Clearance accorded.
12. PP shall achieve the treated domestic effluent standard for the parameter BOD- 10 mg/lit.
13. PP has submitted Certificate from Architect regarding construction completed BUA dated 1.4.2016.
14. PP shall comply conditions stipulated in Environment Clearance issued by MoEF vide No. F.No.21-777/2007-IA.III dtd. 4.03.2008.

For and on behalf of the
Maharashtra Pollution Control Board

(Dr. P. Anbalagan, IAS)
Member Secretary

11.5.2018

Received Consent fee of –

Sr. No.	DD No.	Bank Name	Amount	date
1	133567	Axis Bank	1,25,000/-	8.7.2015
2	131781	Axis Bank	2,06,783	24.2.2015
3	7608751	HDFC Bank	7,77,560/-	26.4.2018

Copy to:

1. Regional Officer, MPCB,Pune and Sub-Regional Officer, MPCB, Pune-II
   -- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Mumbai.
3. CC/CAC desk- for record & website updation purposes.

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

1) A] As per your application, you have provided 3 Nos of Sewage Treatment Plants (STP)s of capacity 450 CMD of MBBR Technology for Hotel - 250 CMD, Mall, Multiplex and Anchor shop- 150 CMD and 50 CMD)

2) B] The Applicant shall operate the effluent treatment plant (STP) to treat the sewage so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

1.	Suspended Solids	Not to exceed	10 mg/l.
2.	BOD 3 Days 27 degree C	Not to exceed	10 mg/l.
3.	COD	Not to exceed	50 mg/l.
4.	Residual Chlorine	Not to exceed	1 ppm

C] The treated effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be connected to the sewerage system provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time. Project Proponent shall achieve the treated domestic effluent standard for the parameter BOD- 10 mg/lit and SRO has submitted verification report dated 7.3.2018 for the installation of online monitoring system parameters Flow, BOD, and TSS at STP outlet.

3) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.

4) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.

5) Water consumption details

Sr. no.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	0.00
2.	Domestic purpose	295
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00

Schedule-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have proposed to installed the Air pollution control (APC) system and also erected following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.	Type of Fuel	Quantity & UoM
01.	DG set (750 KVA x2 Nos)	Acoustic Enclosure	5.5*	Diesel	@ 0.21 Liters/hr/KVA at full load
02.	DG set (385 KVA x2 Nos)	Acoustic Enclosure	4.0*	Diesel	
03.	DG set (200 KVA)	Acoustic Enclosure	4.0*	Diesel	

*** Above roof of the building in which it is installed.**

2. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards.

Particulate matter	Not to exceed	150 mg/Nm^3

3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.

4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

Schedule-III
Details of Bank Guarantees

Project Proponent shall extend the Bank Guarantee as below:

Sr. No.	Consent (Renewal Of C to O)	Amt of BG Imposed	Submission Period**	Purpose of BG #	Compliance Period	Validity
1	Consent to 1st Operate(part)	PP shall extend/Top up BG of Rs. 25 Lakh*	within 15 Days	Towards O & M pollution control system	31.1.2020	30.4.2020

* The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional Office within 15 days of the date of issue of Consent.

++ The Bank Guarantee(s) shall be valid for a period upto: Validity of consent + 4 months

Existing BG obtained for above purpose if any may be extended for period of validity as above.

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Schedule-IV

General Conditions:

1) The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2) The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act 1986 and Municipal Solid Waste (Management & Handling) Rule 2000, Noise (Pollution and Control) Rules, 2000 and E-Waste (Management & Handling Rule 2011.
3) Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.
4) Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
5) Conditions for D.G. Set
   a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
   b) Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
   c) Applicant should make efforts to bring down noise level due to DG set, outside their premises, within ambient noise requirements by proper sitting and control measures.
   d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
   e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
   f) D.G. Set shall be operated only in case of power failure.
   g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
   h) The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.
6) Solid Waste – The applicant shall provide onsite municipal solid waste processing system & shall comply with Municipal Solid Waste (Management & Handling) Rule 2000 & E-Waste (M & H) Rule 2011.
7) Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.
8) Applicant shall submit official e-mail address and any change will be duly informed to the MPCB.
9) The treated sewage shall be disinfected using suitable disinfection method.
10) The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.

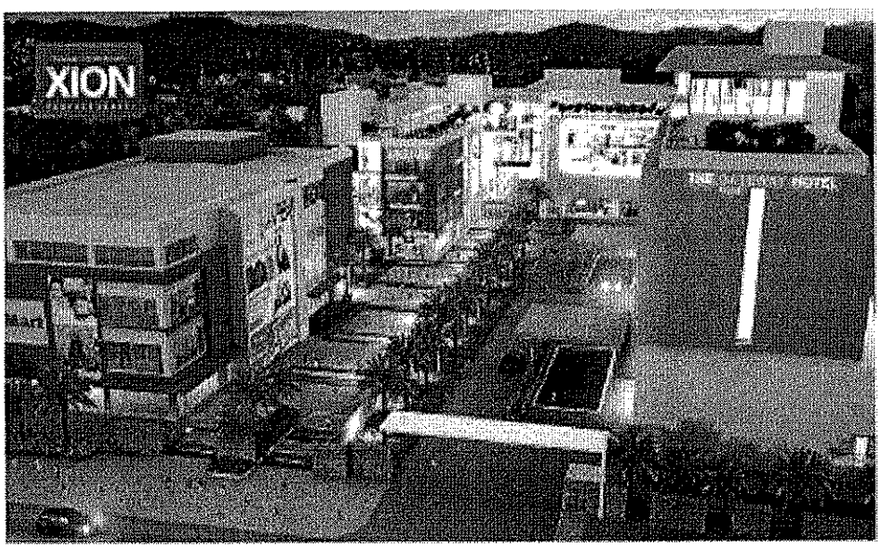
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Annexure VII
Environnement status Report

Environmental Status Report (ESR)

June 2018 to Nov 2018

"Xion"
Mixed Use Development Project
At Hinjwadi,Pune



Proposed by

PSC pacific

Contents

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Project proponent information 3
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Health facility 6
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Environmental Management Audits: 7

Environmental Status Report

Introduction

PSC Pasific. received environment clearance for Mixed used development Project "Xion" at S.No.38/4 at CTS No. 15/5, 15/6, 15/7, 15/8, 16, 17/1, 17/2, 17/2/2, 17/3, 18/1, 18/2, Hinjewadi, Pune, State-Maharashtra. SEAC-III considered the project under screening category 8(a) B2 as per EIA Notification 2006.

Environmental Clearance is obtained vide letter no. F. No. 21-777/2007-IA.III dated 04.03.2008 plot area of 31,451 $m^2$and total built up area of 46,040.96 m^2

Project proponent information

Name	**Ms Nidhi Deshpande** Project Proponent
Address	**PSC Pacific** PSC House, CTS No.111+111/2, Anand Colony, Near Suvarnarekha Dining Hall, Old Karnataka High School Lane, Off PrabhatRoad,Pune 411004
Telephone	+91 20 30223344
Fax	+91 20 25460986
Email ID	info@pscl.in

Plot area details

Details	**Total**	**Unit**
Plot area	31,451	m^2
Net plot area	31,451	**m^2**

Proposed construction area details

Details	**Total**	**Unit**
Plot Area	**31,451**	m^2
Total construction area	46,040.96	**m^2**

Table 1: Environmental Services progress status

Sr.	**Details**	**Status**
1.	DG set	Construction has been completed. No DG set for Construction phase. DG Set capacities of 750 KVA – 3 Nos provided during operatio phase.

Sr.	Details	Status
2.	Landscape area	Landscape area developed at site
3.	Tree plantation	Completed at site
4.	STP work	Completed – Total STP of capacity 400 m3/day (200 m3/day – 1 No. , 150 m3/day – 1 Nos. and 50 m3/day- 1 No.)
5.	Solid waste management: OWC details	Completed. OWC Unit provided at site.
6.	Parking	Completed
7.	Labour camp	Construction completed. No labour camp
8.	Excavation details	Completed
9.	Debris details and its management	-
10.	Ground water recharge: Rain water harvesting	Completed
11.	Storm water	Completed
12.	RMC plant and brick details	Construction work completed.
13.	Contact person on site	Mr. Debashish Seth

Construction facility on site

Construction work completed on site.

Facility provided on site for Labour

Construction work completed on site.

LandExcavation details

Not applicable. Construction work completed.

Water details

Construction phase

Constriction has completed on site.

Operational phase

Water supply source is Hinjwadi Gram Panchayat.

Sewage Treatment Plant details

Construction phase

As construction completed on site, there is no labour camp at present.

Operational phase

Sewage treatment plant of capacity 400 m3/day (200 m3/day – 1 No. , 150 m3/day – 1 Nos. and 50 m3/day- 1 No.) is operational at project site. The treated wastewater is being used for gardening and flushing purpose.

Storm Water Drain

We have provided the proper storm water drainage layout along the periphery. And it is connected to the municipal drainage line which already exists. We have received the permission to use this drain line.

Solid Waste Disposal

Construction phase

Construction has completed on site.

Operational phase

We have provided 1 no. of organic waste converter for management of the municipal solid waste. OWC is located on ground level. The biodegradable waste generated from project site is being treated in OWC and manure generated is used for landscaping purpose.

Power Supply and consumption

Construction phase

Construction has completed on site.

Operation Phase

During operation phase power supply from MSEDCL.

Roads, Traffic and Transport details

Construction phase

Construction has completed on site

Operational phase

We have provided proper 6 m & 7.5 m internal roads and their proper connectivity to main road.

Housing and Slums provision

Construction work completed on site

Slums issue is not applicable for this project.

Air Environment

We are monitoring the ambient air quality every month through MoEF and NABL accredited Lab and six-monthly report have been sent to MoEF, Nagpur and RO & HQ of MPCB offices with the EC compliance condition.

Dust

Construction completed on site

Noise Environment

We have monitored the Noise pollution every month through MoEF and NABL accredited Lab and six monthly reportsare sent to MoEF, Nagpur and RO & HQ of MPCB offices with the EC compliance conditions.

Industries, Wastes and Hazards

It is commercial complex project. This issue is not applicable.

Healthfacility

Construction has completed on site. First Aid facility provided on project site during operation phase.

Other Facility

Construction has completed on site.

Biological Environment

Plantation & Landscaping

Selection of the plant species has been done based on their adaptability to the existing geographical conditions and the vegetation composition of the region. During the development of the green belt within the project area, emphasis has been given to selection of plant species like nitrogen fixing species, species of ornamental values, species of very fast growth with good canopy cover etc.

Landscape development plan

Increasing vegetation in the form of landscape is one of the preferred methods to mitigate air pollution. Plants generate oxygen, serve as a sink for pollutants, reduce the flow of dust and reduce noise pollution.

Environment Monitoring Cell

Environmental management cell has been formed headed by an Environment Manager supported by adequate number of personnel having sufficient educational and professional qualification and experience to discharge 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 of pollution control equipment and green belt

development & maintenance. The head of the cell is directly report to the top management. This cell is the nodal agency to co-ordinate and provide necessary services on environmental issues during construction and operation of the project. This department is interacting with MPCB, MoEF, CPCB and Other environment regulatory agencies. The cell will be effective till handing over of the project to society.

Environmental Management Audits:

The management audits are to determine whether the activities are conforming to the environmental management systems and effective in implanting the environmental policy. They may be internal or external, but carried out impartially and effectively by a person properly trained for it. Broad knowledge of the environmental process and expertise in relevant disciplines is also required. Appropriate audit programs and protocols will be established.

Table 2: Organization & Environment Management Cell

Sr.	Level	Designation	Purpose
1	Honorary	Director / Managing Committee	Policy
2	Manager	Environmental Scientist /Chemist	Job (*)
3	Executive	Supervisor, contractor, Engineers	Implement
4	Third Party	Environmental sampling, analysis will be done through external agency **approved by** MoEFCC / MPCB	Monitoring, testing

The Capital Investment of the Project is 150/- crores.