

PANGKALAHATANG BUOD

Buod ng Paglalarawan sa Panukalang Proyekto

Buod ng Impormasyon tungkol sa Panukalang Proyekto

Ang Solid Cement Corporation (SCC) ay isang corporation na itinatag at binuo sa ilalim ng bisa ng mga batas na umiiral sa Pilipinas. Ang SCC ay kasalukuyang nagpapatakbo ng isang planta ng semento at minahan ng limestone at pozzolan sa bisa ng Mineral Production and Sharing Agreement (MPSA) 124. Dahil sa pangangailangang dagdagan ang produksyon ng semento, nagdesisyon ang pamunuan ng SCC na magpasa ng panukalang palawakin ang kaniyang produksyon ng semento at mina.

Sa kasalukuyan, ang mga sumusunod na Environmental Compliance Certificate (ECC) ang baseha ng SCC sa operasyon ng kanilang planta ng semento at minahan:

1. ECC No. 8808-018-302A na iginawad noong 27 June 1990 para sa siliceous ore mining project na nasa Barrio Pantay at Tagbac, Antipolo, Rizal;
2. ECC No. 9105-0360-301C na iginawad noong 14 January 1992 para sa pagpapalawig ng pagmimina ng limestone, diorite at dacite at pagtatayo ng Planta ng Semento;
3. ECC No. 193-RI-207-95 na iginawad noong 27 April 1995 para sa kanyang Power Plant;
4. ECC No. 04 98 12-16-0785-120 na iginawad noong 28 December 1998 para sa 5.2MW at 4.2MW Diesel Engine Generator Set;
5. Pag amiyenda ng ECC No. 9105-036-301 na iginawad noong 15 July 2004 upang isali ang paggamit ng Alternative Fuel at Raw Material Facilities na nasa loob ng planta;
6. Pag amiyenda ng ECC No. 9105-036-301 na iginawad noong 04 October 2010, upang idagdag ang volcanic tuff dryer facility; at
7. Pag amiyenda ng ECC No. 9105-036-301 na iginawad noong 17 September 2013, para sa paglalagay ng screening system sa imbakan ng limestone.

Ang Solid Cement Corporation (SCC) ay nag-o-operate ng kanyang quarry areas sa ilalim ng bisa ng pag apruba ng Mines and Geosciences Bureau ng Operating Agreement sa Teresa Marble Corporation (TMC). Ang layunin ng Expansion Project na ito ay isama sa operasyon ng planta ang pagtatayo ng bagong linya ng gawaan ng semento, dagdag na AFR substitution at dagdag na pagmimina ng limestone at pozzolan.

Provided below is the photograph of the Project site.



Plate ES1: Panoramic view of the Project Site



Ang buod ng paglalarawan sa panukalang proyekto ay inilalahad sa mga sumusunod

Table ES1.1: Buod ng Paglalarawan sa Proyekto

Opisyal na Pangalan ng Proyekto	Pagpapalawig ng Planta ng Semento at Pagmimina/Pagku-Quarry																																																																																																																																																															
Tagapagtaguyod sa proyekto o Kumpanyang nagmamay-ari ng Proyekto	Solid Cement Corporation (SCC), isang kumpanyang gumagawa ng sementong Type 1 at Type 1-P.																																																																																																																																																															
Lokasyon ng Proyekto at kabuuang laki ng lupa na ookupahin ng proyekto	<p>Ang kasalukuyang The existing cement plant covers 37.2 hectares. The expansion area is estimated to occupy 14 hectares. The total cement plant complex is 63.3 hectares.</p> <p>The quarry area is composed of Pantay and Pamias 2 quarry areas which shall cover an area of about 117.5 hectares. The expansion is confined within Sitio Tagbak, Brgy. San Jose, Antipolo City.</p> <p>The project is bounded by the following coordinates:</p> <p>Cement Complex Site Geographical Coordinates of the Farthest Corners of the Project Site:</p> <table border="1" data-bbox="424 1003 1305 1279"> <thead> <tr> <th colspan="7">SCC Plant Project Approximate Coordinates</th> </tr> <tr> <th rowspan="2">Cor</th> <th colspan="3">LATITUDE</th> <th colspan="3">LONGITUDE</th> </tr> <tr> <th>Deg</th> <th>Min</th> <th>Sec</th> <th>Deg</th> <th>Min</th> <th>Sec</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>14</td> <td>35</td> <td>16.48</td> <td>121</td> <td>12</td> <td>5.41</td> </tr> <tr> <td>2</td> <td>14</td> <td>35</td> <td>31.65</td> <td>121</td> <td>12</td> <td>9.08</td> </tr> <tr> <td>3</td> <td>14</td> <td>35</td> <td>45.78</td> <td>121</td> <td>12</td> <td>39.23</td> </tr> <tr> <td>4</td> <td>14</td> <td>35</td> <td>36.28</td> <td>121</td> <td>12</td> <td>44.42</td> </tr> <tr> <td>5</td> <td>14</td> <td>35</td> <td>11.15</td> <td>121</td> <td>12</td> <td>38.14</td> </tr> </tbody> </table> <p>Quarry Area:</p> <p>MPSA-124 (Pamias 2) After New MOA Area = 46.5138 Has.</p> <table border="1" data-bbox="424 1503 1350 2107"> <thead> <tr> <th colspan="7">MPSA COORDINATES</th> </tr> <tr> <th rowspan="2">Corner</th> <th colspan="3">LATITUDE</th> <th colspan="3">LONGITUDE</th> </tr> <tr> <th>Deg</th> <th>Min</th> <th>Sec</th> <th>Deg</th> <th>Min</th> <th>Sec</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>14</td> <td>34</td> <td>57.82</td> <td>121</td> <td>12</td> <td>39.14</td> </tr> <tr> <td>2</td> <td>14</td> <td>34</td> <td>59.33</td> <td>121</td> <td>12</td> <td>39.9</td> </tr> <tr> <td>3</td> <td>14</td> <td>35</td> <td>0.36</td> <td>121</td> <td>12</td> <td>40.15</td> </tr> <tr> <td>4</td> <td>14</td> <td>35</td> <td>2.27</td> <td>121</td> <td>12</td> <td>41.17</td> </tr> <tr> <td>5</td> <td>14</td> <td>35</td> <td>6.71</td> <td>121</td> <td>12</td> <td>39.53</td> </tr> <tr> <td>6</td> <td>14</td> <td>35</td> <td>14.44</td> <td>121</td> <td>12</td> <td>39.82</td> </tr> <tr> <td>7</td> <td>14</td> <td>35</td> <td>17.26</td> <td>121</td> <td>12</td> <td>39.34</td> </tr> <tr> <td>8</td> <td>14</td> <td>35</td> <td>16.98</td> <td>121</td> <td>12</td> <td>51.33</td> </tr> <tr> <td>9</td> <td>14</td> <td>35</td> <td>15.76</td> <td>121</td> <td>12</td> <td>51.71</td> </tr> <tr> <td>10</td> <td>14</td> <td>35</td> <td>15.31</td> <td>121</td> <td>12</td> <td>51.6</td> </tr> <tr> <td>11</td> <td>14</td> <td>35</td> <td>13.52</td> <td>121</td> <td>12</td> <td>51.94</td> </tr> <tr> <td>12</td> <td>14</td> <td>35</td> <td>13.71</td> <td>121</td> <td>12</td> <td>52.69</td> </tr> </tbody> </table>	SCC Plant Project Approximate Coordinates							Cor	LATITUDE			LONGITUDE			Deg	Min	Sec	Deg	Min	Sec	1	14	35	16.48	121	12	5.41	2	14	35	31.65	121	12	9.08	3	14	35	45.78	121	12	39.23	4	14	35	36.28	121	12	44.42	5	14	35	11.15	121	12	38.14	MPSA COORDINATES							Corner	LATITUDE			LONGITUDE			Deg	Min	Sec	Deg	Min	Sec	1	14	34	57.82	121	12	39.14	2	14	34	59.33	121	12	39.9	3	14	35	0.36	121	12	40.15	4	14	35	2.27	121	12	41.17	5	14	35	6.71	121	12	39.53	6	14	35	14.44	121	12	39.82	7	14	35	17.26	121	12	39.34	8	14	35	16.98	121	12	51.33	9	14	35	15.76	121	12	51.71	10	14	35	15.31	121	12	51.6	11	14	35	13.52	121	12	51.94	12	14	35	13.71	121	12	52.69
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	14	14	34	57.1	121	12	57.36
	15	14	34	49.07	121	13	1.69
	16	14	34	39.7	121	12	47.56
	17	14	34	45.39	121	12	46
	18	14	34	49.15	121	12	45.18
	19	14	34	53.86	121	12	43.48
	MPSA-116-98 (Pantay Quarry)						
	70.98 Has.						
	MPSA COORDINATES						
	LATITUDE			LONGITUDE			
	Corner	Deg	Min	Sec	Deg	Min	Sec
	1	14	36	46.8	121	12	52
	2	14	37	0	121	12	52
	3	14	37	0	121	13	18.7
	4	14	36	50.6	121	13	24
	5	14	36	45.7	121	13	13.6
	6	14	36	33.2	121	13	18.4
	7	14	36	33.5	121	13	27.8
	8	14	36	28.3	121	13	27.8
	9	14	36	25.8	121	13	30
	10	14	36	1.7	121	13	30
	11	14	36	1.7	121	13	36.4
	12	14	35	51.28	121	13	36.4
	13	14	35	47.6	121	13	30
	14	14	36	1.7	121	13	22.95
	15	14	36	26	121	13	16.8
	16	14	36	26	121	13	6.19
	17	14	36	46.8	121	13	6.19
	<p>Ang Planta ng Solid Cement Corporation ay pwedeng puntahan mula Maynila sa pamamagitan ng pagtahak sa Ortigas Extension, passing sa Kaytikling Road na syang pangunahing daan upang marating ang Cainta-Taytay at Antipolo sa lalawigan ng Rizal. Ang total na layo ng Planta mula Maynila ay humigit-kumulang 33 kilometro na pwedeng umabot sa 1 hanggang 1.5 oras.</p>						
Kasalukuyang Estado ng Proyekto	<p>Ang mga ECC ng Solid Cement Corporation na nabanggit sa ika-anim na pahina ay pagsasamasamahin at aamiyendahan upang isama ang mga ipinapanuklanang pagbabago sa Proyekto, ang paglalagay ng dagdag na linya ng gawaan ng semento at dagdag na produksyon ng pagku-quarry.</p>						
Kapasidad o laki ng Proyekto	<p>ANG mga sumusunod ay ang kapasidad ng proyekto:</p> <ol style="list-style-type: none"> Dagdag na produksyon ng pag-quarry ng Limestone, Diorite at Dacite upang maging 19,000 metriko tonelada kada araw; Dagdag na produksyon ng semento mula 1.8 milyong metriko tonelada kada taon hanggang magkaroon ng total na kapasidad na 4.5 milyong metriko tonelada kada taon ng semento; at Dagdag na AFR substitution mula 50% hanggang 80% na rate ng substitution. 						
Mga Bahagi ng Proyekto at	<p>Makikita sa Table ES1.2 ang iba't-ibang bahagi ng Proyekto na bumubuo sa major components at support facilities:</p>						



Teknolohiyang gagamitin sa Proseso	
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Table ES1.2: Listahan ng mga bahagi ng proyekto ng kasalukuyang Planta at quarry kumpara sa mga bagong bahaging kasama ng expansion project

EXPANSION PROJECT COMPARATIVE TABULATION

MAJOR EQUIPMENT DESCRIPTION	EXISTING PLANT	PROPOSED EXPANSION	TOTAL MAJOR COMPONENT	TOTAL
Limestone Crusher 1	400 MTPH			1,100 MTPH
Limestone Crusher 2		1,100 MTPH	1,100 MTPH	
Pozzolana Crusher 1	250 MTPH		250 TPH	650 MTPH
Pozzolana Crusher 2		400 TPH	400 TPH	
Extraction Rate	9500 MTPD	9500 MTPD	19000 MTPD	19000 MTPD
Vertical Raw Mill 3	280 MTPH		280 TPH	560 MTPH
Vertical Raw Mill 4		280 MTPH	280 TPH	
Homogenization Silo 1	23,250 METRIC TONS		23,250 METRIC TONS	40,250 METRIC TONS
Homogenization Silo 2		17,000 METRIC TONS	17,000 METRIC TONS	
Kiln 3	3,800 MTPD		3,800 MTPD	7,300 MTPD
Kiln 4		3,500 MTPD	3,500 MTPD	
Vertical Coal Mill 1	27 MTPH		27 MTPH	54 MTPH
Vertical Coal Mill 2		27 MTPH	27 MTPH	
Clinker Storage	70,000 METRIC TONS		70,000 METRIC TONS	120,000 METRIC TONS
Clinker Silo		50,000 METRIC TONS	50,000 METRIC TONS	
Cement Mill 1	60 MTPH		60 MTPH	450 MTPH
Cement Mill 2	60MTPH		60 MTPH	
Cement Mill 3	120 MTPH		120 MTPH	
Total Cement Mill 1+2+3 Capacity	240 MTPH			
Vertical Cement Mill 4		210 MTPH	210 MTPH	
Cement Silos	8 x 1,500 METRIC TONS	2 x 5,000 METRIC TONS	22,000 METRIC TONS	22,000 METRIC TONS
Tuff Dryer	60 MTPH		60 MTPH	60 MTPH
Bulk Dispatch	2 x 60 MTPH	2x 250 MTPH	620 MTPH	620 MTPH
Bagging System	4 x 90 MTPH	2 x120 MTPH	600 MTPH	600 MTPH
Power Plant	3 x 5.3MW	1 x 10MW	25.9 MW	25.9 MW
Connected Load	24MW @34.5KV Line	33.4 MW @115KV Line	57.4 MW	57.4 MW
Water source from River & Deep Wells	60,000 m3/month	60,000 m3/month	120,000 m3/month	120,000 m3/month
Raw material storage	158,000 METRIC TONS	50,000 METRIC TONS	208,000 METRIC TONS	208,000 METRIC TONS
Coal storage	90,000 METRIC TONS		90,000 METRIC TONS	90,000 METRIC TONS

Paalala: Ang kasalukuyang Limestone Crusher 1 (kinulayan ng dilaw upang madaling Makita) ay muling ggaamitin upang gamiting pandurog ng mga materyales na Pozzolan at tatawaging Pozzolana Crusher 2. ANG bagong Line Crusher naman na may kapasidad na 1,100 MTPH ay siyang bahala sa pangangailangan ng bagong linya ng gawaan ng semento.



Ang bagong linya ng gawaan ng semento ay makikigamit sa mga imprastrukturang nakatayo na sa Planta gaya ng mga kalsada sa looban, bakod, mga pangunahing gamit gaya ng tubig at kuryete at mga bakanteng espasyo. Gagamitin din nito ang kasalukuyang distribusyon ng tubig at kuryente na mag-a-upgrade sa 115KV transmission system.

<p>Environmental Safeguards and Management</p>	<p>Ang mga sumusunod na environmental management ay ipatutupad sa proyekto:</p> <ul style="list-style-type: none"> • Striktong pagpapatupad ng emission abatement techniques • Pagpapatupad ng Environmental Management System. • Sapat na emergency at safety equipment at proseso at regular na training. <p>Ipinapakita sa sumusunod na tabulation ang mga Environmental Safeguards at Management para sa kasalukuyan at panukalang expansion project.</p> <table border="1" data-bbox="406 582 1385 1993"> <thead> <tr> <th data-bbox="406 582 734 672">Environmental Safeguards and Management</th> <th data-bbox="734 582 1061 672">Original Project (Existing)</th> <th data-bbox="1061 582 1385 672">Expansion Project (Proposed)</th> </tr> </thead> <tbody> <tr> <td data-bbox="406 672 734 761">Monitoring of Ambient Air Quality</td> <td data-bbox="734 672 1061 761">Done on a Quarterly basis as committed & part of the EMP</td> <td data-bbox="1061 672 1385 761">Same</td> </tr> <tr> <td data-bbox="406 761 734 851">Noise Level Monitoring</td> <td data-bbox="734 761 1061 851">Part of the internal facility inspection & monitoring</td> <td data-bbox="1061 761 1385 851">Same</td> </tr> <tr> <td data-bbox="406 851 734 940">Water Quality Monitoring</td> <td data-bbox="734 851 1061 940">Conducted by a 3rd Party Service provider on a quarterly basis</td> <td data-bbox="1061 851 1385 940">Same</td> </tr> <tr> <td data-bbox="406 940 734 1993">Solid Waste Management Program</td> <td data-bbox="734 940 1061 1993"> <p>Waste segregation (biodegradable, non-biodegradable and hazardous) from the source. Recyclable materials are identified and segregated and sold to scrap buyer.</p> <p>Residual waste are contained on specific bins and collected by the barangay garbage collector. These are transported at the municipality's recovery facility and ground to include on the manufacturing of decorative bricks and hollow blocks.</p> <p>Hazardous waste is properly contained. Used oil, bunker fuel oil sludge, busted bulbs and expired chemicals are used for the existing AFR facilities & the rest are collected and transported by DENR accredited transporter and treated with compliance to RA 6969.</p> </td> <td data-bbox="1061 940 1385 1993">Same</td> </tr> </tbody> </table>	Environmental Safeguards and Management	Original Project (Existing)	Expansion Project (Proposed)	Monitoring of Ambient Air Quality	Done on a Quarterly basis as committed & part of the EMP	Same	Noise Level Monitoring	Part of the internal facility inspection & monitoring	Same	Water Quality Monitoring	Conducted by a 3 rd Party Service provider on a quarterly basis	Same	Solid Waste Management Program	<p>Waste segregation (biodegradable, non-biodegradable and hazardous) from the source. Recyclable materials are identified and segregated and sold to scrap buyer.</p> <p>Residual waste are contained on specific bins and collected by the barangay garbage collector. These are transported at the municipality's recovery facility and ground to include on the manufacturing of decorative bricks and hollow blocks.</p> <p>Hazardous waste is properly contained. Used oil, bunker fuel oil sludge, busted bulbs and expired chemicals are used for the existing AFR facilities & the rest are collected and transported by DENR accredited transporter and treated with compliance to RA 6969.</p>	Same
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<p>Types and Estimated Generation Rate</p>	<p>Emisyon sa hangin ng criteria pollutants gaya ng CO, particulates, NO_x, and SO_x, at mga basura, sludge or residue, hazardous wastes gaya ng mga basag o pundidong bombilya at iba pang ilaw, gamit na baterya at langfis. Ito ay mga</p>															



of Major Waste Streams	basurang nirereport, idinedeklara at isinumite sa regular na SMR at CMR. Ang mga basurang ito ay inaasahan ding Makita sa expansion project. Ang AFR Substitution rate ay madadagdagan din na isang magandang measure.
Project Duration at Schedule	Ang pagpapatayo ng planta y uumpisahan sa oras na makuha na ang ECC at matatapos sa loob ng 30 months.
Mga manggagawa	Sa estado ng pagpapagawa ng planta, mga 707 mangagawa ang kakailanganin. Sa operasyon ng planta, dagdag na 275 empleyado at kukuhanin pa o iha-hire.
Halaga ng Proyekto	Two Hundred Twenty-Five Milyong Dolyar (US\$225M), or labing isang milyon at dalawang daan at limampung libong piso kung ang gagamitin palitan ay 50Php/US\$ (Php11.25B).
Awtorisadong kinatawan ng Kumpanya at detalye kung paano makikipag-ugnayan sa kanya	<p>Engr. Normandy A. Chan Plant Director- SOLID Plant - Operations - Philippines Address: SOLID Cement Corporation Sitio Tagbac, Brgy San Jose Antipolo City, Philippines 1870 e-Mail: normandy.chan@cemex.com</p> <p>Engr. Alberto A. Afable Technical and Operations Support Manager CEMEX Asia Pte. Ltd. Phil Headquarters Address: 8th Flr., Petron Megaplaza Bldg., Senator Gil Puyat Ave., Makati City, Philippines 1200 e-Mail: alberto.afable@cemex.com</p>

Process Documentation

EIA Team	<p>MEDIATRIX BUSINESS CONSULTANCY</p> <p>Matilde J. Fernando, LL.B., Project Manager and EIA Team Leader L29 Joy-Nostalg Centre, 17 ADB Ave., Ortigas Centre, Pasig City 1600 Telephone No.: (+632)689.7114 Mobile No.: +63917.5064499 Email: mediatrixbusinessconsultancy@gmail.com; medi1425@yahoo.com</p> <p>Bumubuo sa EIA Team ng Preparers</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Field of Expertise</th> </tr> </thead> <tbody> <tr> <td>Matilde R. Jimenez-Fernando</td> <td>Team Leader and socio module</td> </tr> <tr> <td>Engr. Reynaldo Tejada</td> <td>Air Module</td> </tr> <tr> <td>Ria Caramoan</td> <td>Assistant Team Leader</td> </tr> <tr> <td>Juvinal Esteban</td> <td>Socio-economics</td> </tr> <tr> <td>Gregorio Baguioro</td> <td>Air and water quality</td> </tr> <tr> <td>Alexis Fernando</td> <td>Research</td> </tr> <tr> <td>Jessan Jello Bernales</td> <td>Field Assignment</td> </tr> <tr> <td>Maria Liza Martin</td> <td>Field Assignment</td> </tr> </tbody> </table> <p>The Kumpanya, at mga kinatawan nito lalo na si Engr. Alberto A. Afable at ang kanyang Team ay nagbigay ng mga impormasyong mula sa SCC gaya ng in-house inputs/data involving the plans, site and miscellaneous aspects of the existing and expansion project. Ang mga sumusunod ang bumubuo sa grupo ng SCC:</p> <ol style="list-style-type: none"> 1. Engr. Normandy Chan 2. Engr. Alberto Afable 3. Atty. Maria Karen Olidan 4. Engr. Nino Bert Advincula 5. Engr. Rochelle Vicencio 6. Mr. Ariel Yson 	Name	Field of Expertise	Matilde R. Jimenez-Fernando	Team Leader and socio module	Engr. Reynaldo Tejada	Air Module	Ria Caramoan	Assistant Team Leader	Juvinal Esteban	Socio-economics	Gregorio Baguioro	Air and water quality	Alexis Fernando	Research	Jessan Jello Bernales	Field Assignment	Maria Liza Martin	Field Assignment
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Engr. Reynaldo Tejada	Air Module																		
Ria Caramoan	Assistant Team Leader																		
Juvinal Esteban	Socio-economics																		
Gregorio Baguioro	Air and water quality																		
Alexis Fernando	Research																		
Jessan Jello Bernales	Field Assignment																		
Maria Liza Martin	Field Assignment																		



<p>EIA Study Schedule</p>	<p>Presented in the Gantt chart below are the key EIA activities and target approval and ECC issuance:</p> <table border="1" data-bbox="411 331 1375 1397"> <thead> <tr> <th rowspan="2">Activity</th> <th colspan="11">Date</th> <th rowspan="2">Estimated period: 07-08/17</th> </tr> <tr> <th>2/22/16</th> <th>3/16</th> <th>5/16</th> <th>5/16</th> <th>6/16</th> <th>6/16</th> <th>7/16</th> <th>6/17</th> <th>9/17</th> <th>10/17</th> <th></th> </tr> </thead> <tbody> <tr> <td>Submission of PDS with request for Technical Scoping</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Public Scoping</td> <td></td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Site assessment and validation</td> <td></td> <td></td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Technical Scoping with EMB Casehandlers, EIARC and EIA Preparers</td> <td></td> <td></td> <td></td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Data gathering</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Report preparation</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Procedural screening by EMB Casehandler</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Public Hearing</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Review and evaluation by EIARC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td></td> <td></td> </tr> <tr> <td>ECC issuance</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td>█</td> </tr> </tbody> </table>	Activity	Date											Estimated period: 07-08/17	2/22/16	3/16	5/16	5/16	6/16	6/16	7/16	6/17	9/17	10/17		Submission of PDS with request for Technical Scoping	█												Public Scoping		█											Site assessment and validation			█										Technical Scoping with EMB Casehandlers, EIARC and EIA Preparers				█									Data gathering	█	█	█	█	█	█	█	█					Report preparation	█	█	█	█	█	█	█						Procedural screening by EMB Casehandler								█					Public Hearing									█				Review and evaluation by EIARC										█			ECC issuance											█	█
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	<p>because of the expected air emissions especially particulates from cement and quarry production.</p> <ul style="list-style-type: none"> • Indirect Impact Area (IIA) is the area that can be affected by the transportation of construction materials during the construction phase and the quarrying and hauling of raw materials during operations stage. <p>Ang Mapa ng Impact Areas ay matatgpuan sa Figure ES 2.</p>																																										
<p>EIA Methodology</p>	<p>The EIA ay inihanda ayon sa mga panuntunan na itinakda ng batas sa Philippine Environmental Impact Statement System. Inilalarawan sa Table sa ibaba ang detalye ng EIA methodology sa bawat environment sector/component.</p> <p style="text-align: center;"><i>Table ES3: EIA Methodology</i></p> <table border="1" data-bbox="400 607 1382 2116"> <thead> <tr> <th data-bbox="400 607 647 674">EIA Study Module</th> <th data-bbox="647 607 1059 674">Parameters/Scope</th> <th data-bbox="1059 607 1382 674">Baseline Sampling and Methodology</th> </tr> </thead> <tbody> <tr> <td colspan="3" data-bbox="400 674 1382 703"><i>Land</i></td> </tr> <tr> <td data-bbox="400 703 647 857">Geology /Geomorphology, Pedology, Land Use & Classification</td> <td data-bbox="647 703 1059 857">Reconnaissance, land use, land classification assessment, slope, soil types and classification, erosion</td> <td data-bbox="1059 703 1382 857">Secondary data, soil sampling and testing, review of geological reports and maps, soil site assessment</td> </tr> <tr> <td data-bbox="400 857 647 981">Terrestrial Biology – Wildlife and Vegetation</td> <td data-bbox="647 857 1059 981">Flora and fauna species inventory, species endemicy and conservation status, species abundance, frequency and distribution</td> <td data-bbox="1059 857 1382 981">Use of secondary data and inventory</td> </tr> <tr> <td colspan="3" data-bbox="400 981 1382 1010"><i>Water</i></td> </tr> <tr> <td data-bbox="400 1010 647 1256">Hydrology/ Hydrogeology</td> <td data-bbox="647 1010 1059 1256">Regional hydrogeology, catchment and drainage system</td> <td data-bbox="1059 1010 1382 1256">Spring & well inventory, flow measurements, use of secondary data, water balance analysis, flow duration and water flow analysis and groundwater recharge and production analysis, interviews</td> </tr> <tr> <td data-bbox="400 1256 647 1440">Water Quality</td> <td data-bbox="647 1256 1059 1440">Physico-chemical and bacteriological characteristics of rivers, wells, springs, and coastal water</td> <td data-bbox="1059 1256 1382 1440">Primary data were secured through water sampling and laboratory analysis with additional sampling station within Primary Homes' subdivision.</td> </tr> <tr> <td data-bbox="400 1440 647 1659">Freshwater Ecology</td> <td data-bbox="647 1440 1059 1659">Full accounting of all existing benthic habitats, species, composition, density, and diversity of sea grass resources and associated macro benthic algae in front of the project site , commercially-important macro invertebrates in the inter-tidal areas, plankton community</td> <td data-bbox="1059 1440 1382 1659">Use of primary and secondary data and interviews</td> </tr> <tr> <td colspan="3" data-bbox="400 1659 1382 1688"><i>Air</i></td> </tr> <tr> <td data-bbox="400 1688 647 1843">Air Quality</td> <td data-bbox="647 1688 1059 1843">Ambient air quality and noise levels</td> <td data-bbox="1059 1688 1382 1843">Primary data through sampling and laboratory analysis with additional sampling station noise within Primary Homes' subdivision</td> </tr> <tr> <td data-bbox="400 1843 647 1966">Meteorology/ Climatology</td> <td data-bbox="647 1843 1059 1966">Monthly average rainfall, climatological normal and extremes, wind rose diagrams, and frequency of tropical cyclones</td> <td data-bbox="1059 1843 1382 1966">Use and review of secondary data</td> </tr> <tr> <td data-bbox="400 1966 647 2033">Air Dispersion Modeling</td> <td data-bbox="647 1966 1059 2033">Worst case scenario identification, use of meteorological data</td> <td data-bbox="1059 1966 1382 2033">Use of AUSPLUME Model</td> </tr> <tr> <td data-bbox="400 2033 647 2089">Noise</td> <td data-bbox="647 2033 1059 2089"></td> <td data-bbox="1059 2033 1382 2089">Sampling station noise within Primary Homes' subdivision</td> </tr> <tr> <td colspan="3" data-bbox="400 2089 1382 2116"><i>Climate Change</i></td> </tr> </tbody> </table>	EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	<i>Land</i>			Geology /Geomorphology, Pedology, Land Use & Classification	Reconnaissance, land use, land classification assessment, slope, soil types and classification, erosion	Secondary data, soil sampling and testing, review of geological reports and maps, soil site assessment	Terrestrial Biology – Wildlife and Vegetation	Flora and fauna species inventory, species endemicy and conservation status, species abundance, frequency and distribution	Use of secondary data and inventory	<i>Water</i>			Hydrology/ Hydrogeology	Regional hydrogeology, catchment and drainage system	Spring & well inventory, flow measurements, use of secondary data, water balance analysis, flow duration and water flow analysis and groundwater recharge and production analysis, interviews	Water Quality	Physico-chemical and bacteriological characteristics of rivers, wells, springs, and coastal water	Primary data were secured through water sampling and laboratory analysis with additional sampling station within Primary Homes' subdivision.	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	Temperature change	Seasonal Temperature increase (in °C) in 2020 and 2050 under medium range emission scenario in Cebu Monthly Average Temperature without Climate Change Monthly Average Temperature with Climate Change (2006-2035)	Effects of Temperature Increase
	Rainfall change	Seasonal rainfall change (in %) in 2020 and 2050 under medium range emission scenario in Cebu Monthly Average Rainfall without Climate Change (1980-2010) Monthly Average Rainfall with Climate Change (2006-2035) Monthly Average Rainfall with Climate Change (2006-2065)	Effects of change in rainfall pattern
	Greenhouse as Assessment	GHG Emissions based on IPCC 2006 Guidelines and USEPA Procedure	Bunker oil consumption vs GHG emissions
<i>People: Socio-Economic, Health</i>			
	Public health and Demography	Morbidity and mortality trends, Demographic data of impact area: <ul style="list-style-type: none"> - Number of households and household size - Land area, - Population, - Population density /growth - gender and age profile, - literacy rate, profile of educational attainment 	Interviews with key elected officials of the barangays (from barangay captains to councilors and the social welfare barangay officers/ barangay health workers); analysis of secondary health data; Use of secondary data from RHU and NSO; Interviews with the locals; household-level survey
	Socio-economics	Socioeconomic data: Main sources of Income, Employment rate/ profile, sources of livelihood, Poverty incidence, commercial establishments and activities, banking and financial institutions	Perception surveys, Interviews with municipal and barangay officials; analysis of secondary data; analysis of survey results Provision of traffic management flow in a traffic management plan Provision of housing options for workers within the vicinity
<i>Environmental Risk Assessment</i>			
	Risk Assessment	Safety risks and physical risks	Consequence and Frequency analyses to be undertaken using the methodology described in the Revised Procedural Manual for DAO 2003-30
Public participation sa paggawang EIA Study	Kahit na ang operasyon bg SCC ay lagging mino-monitor ng Multipartite Monitoring Team (MMT) sa ilalim ng Mine Rehabilitation Fund Committee (MRFC), ang public participation sa pamamagitan ng mga sumusunod ay ginawa din: <ol style="list-style-type: none"> 1. Public Scoping – 22 February 2016 2. Perception Survey - June 2016 Ang MMT ay regular na nagpupulong upang i-monitor ang pagsunod ng SCC, bigyan impormasyon ang mga stakeholders ukol sa proyekto, kasama din ang mga impacts		



	at benefits at bigyan sila ng oportunidad na iparinig at ipahayag ang kanilang mga damdamin, isyu, kuru-kuro, suhestiyon, at pagpapaliwanag sa mga bagay na concern nila ukol sa proyekto. Ang approved Environmental Protection at Enhancement Program (EPEP) at ang Final Mine Rehabilitation at Decommissioning Plan (FMRDP) ng SCC ay ipinatutupad din.
CLRF Commitments	<p>Sa mga kahalintulad na proyekto gaya ng pagmimina at paggawa ng semento, Contingent Liability and Rehabilitation Fund (CLRF) ay dapat na ipatupad at sundin kapalit ng EMF at EGF. Itong CLRF ay isang environmental guarantee fund mechanism that ensures the just and timely compensation for damages and progressive and suitable rehabilitation for any adverse effect a mining operation or activity may cause. Ang pondong ito ay binubuo ng mga sumusunod:</p> <ul style="list-style-type: none"> • Monitoring Trust Fund (MTF) • Mine Rehabilitation Fund (MRF) • Mine Waste Tailings Reserve Fund (MWTRF) and • Final Mine Rehabilitation and Decommissioning Fund (FMRDF) <p>As of 2nd Quarter of 2016, ang SCC ay mayroong mga sumusunod na account sa Landbank:</p> <ul style="list-style-type: none"> • CLRF Php 5,397,850.51 • MTF 150,000.00 • ETF 50,000.00 <p>Para naman sa Social Development and Management Program (SDMP), ang SDMP budget para sa taong 2017 ay Php8,851,703.51.</p>

EIA Summary (Buod ng EIA)

Summary of Alternatives Considered in terms of Siting, Technology Selection/Operation Processes and Design o Buod ng mga Pagpipilian ayon sa lugar, teknolohiya at proseso ng operasyon

Ang mga sumusunod na pamantayan ay isinaalang-alang sa pagpili ng lugar ng proyekto:

Technology Selection/Operation Processes

Wala ng iba pang lugar na isinaalang-alang sapagkat ag pangunahing konsiderasyon sa pagpili ay ang lapit ng lugar ng Planta at quarry at ang iba pang pasilidad na maaring gamitin ng expansion project na mayroon na sa kasalukuyang planta. Sa quarry operations naman, pangunahing dahilan ay ang pagkakaroon na nito ng Operating Agreement sa TMC nan a-aprubahan na ng MGB.

Maaring Mangyari Kung Walang Proyekto

Kung walang proyekto o hindi matutuloy ang proyekto, ang mga sumusunod ay hindi mangyayari at hindi matutupad:

- Pagkakaroon ng nahapuhay ng mga tao
- Pagkakaroon ng social development and management program
- Pagkakaroon ng dadag kita ng lokal na pamahalaan ng Antipolo
- Pagkakaroon ng multiplier o domino effect ng proyekto gaya ng dagdag hanapuhay gaya ng tindahan, tricycle terminals, etc.

Buod ng maaring maging epekto ng proyekto kahit na mayroon pang mitigation measures

Ang maaring maging epekto ng proyekto sa worst case scenario ay ang usok o alikabok ng planta at quarry at ingay na maaring maidulot nito na base sa karanasan matagumpay naming naisasaayos ng SCC. Pinakamahalaga sa lahat ay ang positibong epekto ng proyekto ang pagkakaroon ng hanapuhay at kabuhayan ng mga tao, ang SDMP na ibinibigay ng Proyekto, environmental protection sa EPEP at progressive rehabilitation sa FMRDP.

Mga hindi inaasahang maaring mangyari sa proyekto ay epekto nito sa pagdedesisyon ng SCC

Ang maaring mangyari na hindi inaasahan ay ang 1). Usok o alikabok na patuloy na ginagawan ng mitigating measure ng kumpanya at ang 2). oil spill na kasalukuyang dinoble na ng SCC ang kanyang mitigation at contro system para dito.



Summary of Baseline Characterization (based on the result of the long term monitoring and compared with the previous baseline), Key Environmental Impacts and Management & Monitoring Plan (including assessment of the effectivity of the measures and the propose changes to consider the expansion), and status of EMF & EGF implementation (including the proposed changes to include the expansion).

Summary of Baseline Characterization	Key Environmental Impacts and Management & Monitoring Plan (including assessment of the effectivity of the measures and the proposed changes to consider the expansion)
Land	<p>Ang kasalukuyang klasipikasyon ng lupa ayon sa City of Antipolo ay mining area. Dahil dito, walang epekto ang proyekto sa gamit sa lupa.</p> <p>Ang maaring maging epekto ng proyekto sa lupa ay ang construction ng Planta na mangangailangan ng clearing at earthworks. Dito naman ipapatupad ang mga measures na iiwas sa negatibong epekto gaya ng dust management system at noise buffers.</p>
Water	<p>Konti lamang ang gagamiting tubig sa expansion project. na gagamitin lamang sa pagkontrol ng dust emission, fire fighting, pandilig at domestic use. ANg kukunan ng tubig ay ang mga kasalukuyang poso na ginagamit ng kasalukuyang Planta. Wala itong kompetisyon sa tubig sa komunidad dahil ang tubig nila ay galling sa Manila water at maliit na populasyon lamang ang gumagamit ng tubig poso ayon sa June 2016 perception survey.</p> <p>Regular na pagbabantay ng kalidad ng tubig ay ginagawa din sa Kaynaog upstream and downstream. Ang resulta ay pasado sa standards ng DENR. Buwanang pagtetest din ay ginagawa para sa kalidad ng groundwater at fresh water. ANg tubig ulan ay dumidiretso sa siltation pond system. Ang mga kontaminadong rainwater sa maintenance area dumidiretso sa oil and water separator bago i-discharge sa drainage system. Ang regular na inspection at maintenance ng mga siltation ponds ay ginagawa upang maiwasan ang mga tagas na maaring maka-epekto sa drainage system at water bodies.</p>
Air	<p>Sa construction ng planta at operasyon nito, maaring makaepekto ang air emissions lalo na ang mga alikabok mula sa cement manufacturing at quarry operations na mga makina at sasakyan.</p> <p>Ayon sa resulta ng air quality monitoring, ang concentrations of NO₂, at SO₂ ay mas mababa sa CAA limit na 340 µg/Ncm and 260 µg/Ncm, respectively sa lahat ng stations na nakolekta noong August 2, 2013; June 5, 2013; August 12, 2013; November 19, 2013; February 17, 2014; at May 23, 2014. Subalit ang TSP concentrations sa stations sa Day Care Center at Nursery School collected on November 19, 2013 and February 14, 2014 failed to meet the CAA limit of 300µg/Ncm for TSP, 200µg/Ncm for PM₁₀, 260µg/Ncm for NO₂, and 340µg/Ncm for SO₂, respectively.</p>
People	<p>Dagdag na trabaho ay maibibigay ng proyektos sa mga qualified na local na residente. Ang implementation ng Social Development at Management Programay itutuloy at dadagdagan.</p> <p>Noong 2007, ang City ng ANTipolo ay nakapagtala ng total revenue na ₱993.1 million, ito 5.6 percent higit na mataas mula sa nakaraang taon, noong 2010 ito ay mas lumaki at naging ₱1.56 billion. Ang pwesto nito na malapit sa Metro Manila ay isa sa mga sanhi nito at ang growth ng real estate industry at revenue mula sa real property taxes ay lumaki din ng 32.1 percent mula 2006 to ₱146.2 million. Mayroon ng halos 456 residential subdivisions sa Antipolo.</p> <p>Sa kabuuan, dahil sa expansion project, ang mga sumusunod na consumption ng mga sumusunod na utilities ay patuloy na lalaki na makakadagdag din ng kita sa mga suppliers at sa kabuuan ay sa national at local government:</p> <ul style="list-style-type: none"> • Raw Materials



	<ul style="list-style-type: none">• Fuels• Power• Others <p>Also, because of the expansion project, the following fixed cost of Solid Cement will increase</p> <ul style="list-style-type: none">• Wages• Fees• Hired Manpower• Maintenance• Services• Rentals• Other Fixed Costs
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Buod ng Key Environmental Impacts and Management and Monitoring Plan gayundin ang plano para sa EMF at EGF

Ang maaring kabuuang epekto ay nakikita sa construction at operation phase ng expansion project. Dagdag na emission at alikabok ang maaring idulot at dahil ditto ay mas epektibong dust management system ang ipatutupad gaya ng conversion of the electrostatic precipitator to bag house/filters to improve dust-capture. This document also ensures that the overall project benefits are optimized and adverse impacts are minimized. Tables A and B present the impact mitigation matrix for this project as well as the summary table for the Impact Management and Monitoring Plan (IMMoP).

Ang CLRF budget ay dadagdagan ayon sa Mining Law upang idagdag ang operations at activities ng expansion project. Ito ay ikokonsulta sa MRFC at CLRFSC.