



Sustainable Operations & Maintenance Policy Handbook

*MarBorg Industries Headquarters
728 East Yanonali Stree #A
Santa Barbara, California 93103*





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MarBorg Industries - Employee Handbook Addendum

Issued: January 21, 2011

Instructions: Please maintain this addendum with your current handbook.

MarBorg No Smoking Policy:

In order to maintain a safe, healthy, and comfortable working environment and to ensure compliance with all applicable laws, MarBorg Industries is a 100% smoke free workplace. Smoking is prohibited throughout the facilities and grounds owned and operated by MarBorg Industries. This policy also applies to all Company owned, leased or rented vehicles. Employees may not take additional breaks for the purpose of smoking.

Applicability

The policy is applicable at all times to all employees and visitors on properties owned and operated by MarBorg Industries.

Questions and Concerns

Questions or concerns regarding this policy should be directed to the Human Resources Manager.

Violations

Violations of this policy should be reported to the Human Resources Manager. Any employee or visitor in violation of this policy may be removed from the site and/or subject to disciplinary action.

Contact Information

Elizabeth Castañeda
Human Resources Manager
MarBorg Industries
P.O. Box 4127
Santa Barbara, CA 93140
805.963.1852 Phone

Approved by:

A handwritten signature in dark ink that reads 'Mario A. Borgatello'.

Mario A. Borgatello
President



MARBORG INDUSTRIES HEADQUARTERS

Sustainable Purchasing Policy

October 2010

SECTION 1: POLICY SCOPE

This policy applies to the sustainable purchasing at MarBorg Industries Headquarters site located at 728 Yanonali Street #A and that are within the building and site management's control. This policy applies to sustainable purchasing of the following types of products:

- Ongoing Consumables.
- Durable goods
- Building materials used in facility alterations and additions
- Mercury-containing lamps

Food and beverages are not included in the scope of this policy.

SECTION 2: POLICY GOALS

To purchase ongoing consumables in a manner that will:

- Protect the environment and public health by purchasing materials with measureable environmental performance metrics.
- Conserve natural resources by having a comprehensive sustainable purchasing policy.
- Minimize waste, including landfilling and incineration, and reduce toxicity by following a strict sustainable purchasing policy that outlines sustainable criteria.
- Purchase sustainable ongoing consumables for at least 40% of purchases by cost.
- Purchase sustainable durable goods for at least 40% of purchases by cost.
- Develop comprehensive purchasing and waste reduction goals and strategies for MarBorg Industries Headquarters.
- Purchase 100% recycled content printing paper.

SECTION 3: PERFORMANCE METRIC

Sustainable Purchasing of Ongoing Consumables

The term "ongoing consumables" refers to low-cost-per-unit materials that are regularly used and replaced through the course of daily business operations. These products may include, but are not limited to: printing and copying paper, notebooks, envelopes, business cards, sticky notes, paper clips, toner cartridges, and batteries. MarBorg Industries Headquarters goal is that at least 60% of the cost of goods purchased will comply with one or more of the following criteria:



- Contains at least 10% post-consumer and/or 20% post-industrial material
- Contains at least 50% rapidly renewable material (e.g., bamboo, cotton, cork, wool)
- Contains at least 50% materials harvested and extracted and processed within 500 miles of the facility
- Consists of at least 50% Forest Stewardship Council (FSC)-certified paper products
- Rechargeable batteries

MarBorg Industries Headquarters acknowledges the value of purchasing sustainable products and requires that vendor(s) support that effort when appropriate and/or possible. MarBorg Industries Headquarters requests that vendor(s) notify them of recycled content and reduced packaging options or alternative products that would comply with the above specifications. Nothing contained in this policy shall be construed as requiring MarBorg Industries Headquarters to procure products that do not perform adequately for their intended use, exclude adequate competition, or are not available at a reasonable price in a reasonable period of time.

Sustainable Purchasing of Durable Goods

The term “durable goods” refers to higher-cost-per-unit materials that are replaced infrequently and/or may require capital outlays to purchase. These products may include, but are not limited to: office equipment (such as computers, monitors, printers, copiers, and fax machines), appliances (refrigerators, dishwashers, and water coolers), external power adaptors, televisions, and furniture. The purchasing criteria for these products fall into the following two categories:

Electronics and Appliances

MarBorg Industries Headquarters’ goal is that at least 40% of the cost of goods purchased will comply with one or more of the following criteria:

- Energy Star labeled products, when available
- Electronic Product Environmental Assessment Tools (EPEAT) rated products (at least bronze level)
- The equipment replaces conventional gas-powered equipment, i.e. maintenance equipment

Furniture

MarBorg Industries Headquarters’ goal is that at least 40% of the cost of goods purchased will comply with one or more of the following criteria:

- Contains at least 10% post-consumer and/or 20% post-industrial material
- Contains at least 70% salvaged material from off-site or outside the organization



- Contains at least 70% salvaged material from on-site through an internal materials and equipment reuse program
- Contains at least 50% rapidly renewable material (bamboo, cotton, cork, wool)
- Contains at least 50% materials harvested, extracted and processed within 500 miles of the facility/site
- Consists of at least 50% Forest Stewardship Council (FSC) certified wood

MarBorg Industries Headquarters acknowledges the value of purchasing sustainable products and requires that vendor(s) support that effort when appropriate and/or possible. MarBorg Industries Headquarters requests that vendor(s) notify them of Energy Star and sustainable furniture opportunities that would comply with the above specifications, as well as reduced packaging options.

Sustainable Purchasing: Facility Alterations and Additions

This policy covers materials that are permanently or semi-permanently attached to the building itself in the course of facility renovations, demolitions, refits and new construction additions. These products may include, but are not limited to: building components and structures (wall studs, insulation, doors, and windows), panels, attached finishes (drywall, trim, ceiling panels), carpet and other flooring materials, adhesives, paints and coatings. MarBorg Industries Headquarters' goal is that at least 50% of the cost of goods purchased will comply with one or more of the following criteria:

- Contains at least 10% post-consumer and/or 20% post-industrial material
- Contains at least 70% salvaged material from off-site or outside the organization
- Contains at least 70% salvaged material from on-site through an internal materials and equipment reuse program
- Contains at least 50% rapidly renewable material (bamboo, cotton, cork, wool)
- Contains at least 50% materials harvested/extracted and processed within 500 miles of the facility/site
- Consists of at least 50% Forest Stewardship Council (FSC) certified wood
- Adhesives and sealants comply with SCAQMD rules governing allowable VOC content (see appendix for more information)
- Paints and coatings comply with Green Seal's GS-11 requirements governing VOC emission levels
- Choose paints colors have a high level of reflectivity
- Finished flooring is Floor Score-certified and constitutes a minimum of 25% of the finished floor area
- Carpet and carpet cushion meets the requirements of the Carpet and Rug Institute (CRI) Green Label Plus carpet testing program
- Composite panels and agrifiber products contain no added urea-formaldehyde resins



MarBorg Industries Headquarters acknowledges the value of purchasing sustainable products and requires that vendor(s) support that effort when appropriate and/or possible. MarBorg Industries Headquarters requests that vendor(s) notify them of potential opportunities that would comply with the above specifications, as well as reduced packaging options.

Sustainable Purchasing: Toxic Material Source Reduction – Reduced Mercury in Lamps

MarBorg Industries Headquarters seeks to reduce the amount of mercury brought into all sites through purchase of lamps for the buildings and associated grounds. MarBorg Industries Headquarters' goal is that at least 90% of the number of lamps purchased will meet the following overall mercury-content target:

- No more than 70 picograms of mercury per lumen-hour

MarBorg Industries Headquarters' representatives acknowledge the value of purchasing low-mercury lamps and require that vendors support that effort when appropriate and/or possible. MarBorg Industries Headquarters requests that vendor(s) notify them of specific lamps and other opportunities that would comply with the above specifications, as well as reduced packaging options.

SECTION 4: PERFORMANCE EVALUATION

MarBorg Industries Headquarters and/or a specified vendor will record and track purchases on a monthly basis. MarBorg Industries Headquarters' personnel and/or a specified vendor responsible for purchasing will report MarBorg Industries Headquarters' purchases to the appropriate MarBorg Industries Headquarters representative using the provided Materials Purchasing Worksheet. The vendor is required to track and report MarBorg Industries Headquarters' purchases monthly. The vendor will use MarBorg Industries Headquarters Materials Purchasing Worksheet or a MarBorg Industries Headquarters approved alternative reporting method. The vendor is prepared to report the manner by which each product purchase meets the following purchasing criteria. Whenever possible, MarBorg Industries Headquarters personnel should include an evaluation of the environmental and public health benefits achieved through sustainable purchasing of the goods described under Section (3).

SECTION 5: RESPONSIBLE PARTY

The Executive Assistant shall implement this policy within MarBorg Industries Headquarters in coordination with other appropriate organization personnel, including but not limited to, MarBorg Industries Headquarters' Purchasing Officer, MarBorg Industries Headquarters employees, parties purchasing materials on MarBorg Industries Headquarters' behalf and/or companies contracted to provide goods to MarBorg Industries Headquarters.



Contact Information for Responsible Party:	
Name:	Kathy Koeper
Job Title:	Manager/Executive Assistant
Phone:	805-963-1852
Email:	kkoeper@MarBorg.com
Date of assignment:	October 1, 2010

SECTION 6: PROCEDURES AND STRATEGIES

This policy covers purchases that are within the building and site management's control. MarBorg Industries Headquarters personnel may use any qualifying vendor to procure the products described in Section (3), and are encouraged to also consider the following areas of interest:

Packaging

MarBorg Industries Headquarters desires to reduce waste generated through daily operations and recognizes that such reduction begins with the material that enters each facility/site. MarBorg Industries Headquarters will request that all items purchased be packaged and delivered with minimal packaging material. MarBorg Industries Headquarters reserves the right to request that vendors alter the packaging of goods delivered, when appropriate and/or possible.

Recycled Content

MarBorg Industries Headquarters requests that all vendors provide recycled content options for goods when available. If a product is available with recycled content, vendor will disclose that option to the appropriate MarBorg Industries Headquarters representative. If a product is available with recycled content, but MarBorg Industries Headquarters does not specifically request as such, the vendor will default to order the product with recycled content, unless it exceeds the cost of the conventional product by 10% or greater. Recycled content targets may be overridden at the discretion of MarBorg Industries Headquarters representatives if certain products with recycled content present themselves as cost-prohibitive.

SECTION 7: TIME PERIOD

This policy shall take effect on October 1, 2010 and shall continue indefinitely or until amended and/or replaced by a subsequent sustainable purchasing policy.

APPENDIX:

Low-Emitting Adhesives and Sealants

All adhesives and sealants used on the interior of the building shall comply with the requirements listed in Table A.



Table A.

ARCHITECTURAL ADHESIVES	MAX VOCs [g/L]	WELDING & INSTALLATION	MAX VOCs [g/L]
Carpet and carpet pad adhesives	50	PVC welding	510
Wood flooring adhesives	100	CPVC welding	490
Rubber floor adhesives	60	ABS welding	325
Subfloor adhesives	50	Plastic cement welding	250
Ceramic tile adhesives	65	Adhesive primer for plastic	550
Vinyl (VCT) and asphalt tile adhesives	50	Contact adhesive	80
Drywall and panel adhesives	50	Special purpose contact adhesive	250
Cove base adhesives	50	Structural wood member adhesive	140
Multipurpose construction adhesives	70	Sheet applied rubber lining operations	850
Structural glazing adhesives	100	Top and trim adhesive	250

SUBSTRATE ADHESIVES	MAX VOCs [g/L]	SEALANTS	MAX VOCs [g/L]
Metal to metal	30	Architectural	250
Plastic foams	50	Nonmembrane roof	300
Porous materials (except wood)	50	Roadway	250
Wood	30	Single-ply roof membrane	450
Fiberglass	80	Other	420

AEROSOL ADHESIVES	VOC Limit by Wgt.	SEALANT PRIMERS	MAX VOCs [g/L]
General purpose mist spray	65%	Architectural, nonporous	250



General purpose web spray	55%	Architectural, porous	775
Special purpose	70%	Other	750

Low-Emitting Paints and Coatings

Paints used on the interior of the building shall comply with requirements listed in Table B. Coatings, primers and undercoats used on the interior of the building shall comply with the requirements listed in Table C.

Table B.

INTERIOR PAINTS	MAX VOCs [g/L]	MAX VOCs [g/L]
Non-flat (eggshell, semi-gloss, gloss)	GS-11	150
Flat	GS-11	50
Anti-corrosion paints and coatings	GS-03	250

Table C.

ARCHITECTURAL COATINGS, PRIMERS & UNDERCOATS	MAX VOCs [g/L]	ARCHITECTURAL COATINGS, PRIMERS & UNDERCOATS	MAX VOCs [g/L]
Bond Breakers	350	Metallic pigmented coatings	500
Wood Varnish	350	Multi-color coatings	250
Wood Sanding Sealers	350	Pigmented lacquer	550
Wood Lacquer	550	Pre-treatment wash primers	420
Clear Brushing Lacquer	680	Primers, sealers, and undercoaters	200
Concrete-curing compounds	350	Quick-dry enamels	250
Dry-fog coatings	400	Quick-dry primers, sealers and undercoaters	200
Fire-proofing exterior coatings	350	Recycled coatings	250
Fire-retardant coatings – Clear	650	Rust preventative coatings	400



Fire-retardant coatings – Pigmented	350	Shellac – Clear	730
Floor Coatings	100	Shellac – Pigmented	550
Graphic arts/signage coatings	500	Specialty primers	350
Industrial maintenance (IM) coatings	250	Stains	250
High temperature IM coatings	420	Waterproofing sealers	250
Japans/faux finish coatings	350	Waterproofing concrete sealers	400
Magnesite cement coatings	450	Wood preservatives	350
Mastic coatings	300		

Low-Emitting Flooring Systems

All carpet installed in the building interior shall meet the testing and product requirements of the Carpet and Rug Institute’s (CRI) **Green Label Plus** program. All carpet pad installed in the building interior shall meet the testing and product requirements of CRI **Green Label** program.

All carpet adhesive shall meet the VOC limit listed in Table A (50 g/L). All hard surface flooring must be certified as compliant with the Floor Score standard.

Low-Emitting Composite Wood Products

Composite wood and agrifiber products used on the interior of the building shall contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies shall contain no added urea-formaldehyde resins. Composite wood and agrifiber products are defined as: particleboard, medium density fiberboard (MDF), plywood, wheatboard, strawboard, panel substrates and door cores. Materials considered fit-out, furniture, and equipment (FF&E) are not considered base building elements and are excluded from these requirements.



MARBORG INDUSTRIES HEADQUARTERS
Solid Waste Management Policy
October 2010

SECTION 1: POLICY SCOPE

This policy applies to the collection, sorting, diversion, and disposal of ongoing consumables, durable goods, and building materials associated with facility alterations and additions accrued in the operations of MarBorg Industries Headquarters facility located at 728 Yanonali Street #A; and that are within the building and site management's control.

This policy will apply to, but is not limited to, the following types of materials:

- Ongoing Consumables, including but not limited to:
 - Paper
 - Cardboard
 - Glass
 - Plastic
 - Metals
 - Landscape waste
 - Batteries
- Mercury-containing lamps
- Durable Goods, including but not limited to:
 - Electronic equipment
 - Furniture
- Building Materials used in facility alterations and additions, including but not limited to:
 - Building components and structures (wall studs, insulation, doors, windows)
 - Panels
 - Attached finishings (drywall, trim, ceiling panels)
 - Carpet and other flooring material
 - Adhesives
 - Sealants
 - Paints and coatings

SECTION 2: POLICY GOALS

To manage solid waste in a manner that will:

- Protect the environment and public health by being the leading waste hauler in Santa Barbara County.



- Showcase our commitment to the environment and goals for state-required waste reduction by providing outreach and education to the local community.
- Conserve natural resources by promoting activities that reduce waste such as mandating double-sided printing, providing employees with a reusable MarBorg Industries cup for coffee and water, promoting email correspondence, and providing clients with electronic billing options.
- Recycle 90% of all waste produced at MarBorg Industries Headquarters.
- Divert 100% of all batteries and mercury-containing lamps from landfill disposal.
- Divert 95% of all construction and demolition waste created through upgrades and renovations to the facility.

SECTION 3: PERFORMANCE METRIC

The successful implementation of this policy will be measured by the ongoing recycling rate achieved. The recycling rate is derived by comparing the amount of consumables diverted from the landfill to those consumables sent to the landfill over a given time period. The policy's initial performance metric will be to achieve the reuse, recycling and/or composting of:

- At least 70% of the ongoing consumable waste stream (by weight or volume)
- 100% of discarded batteries
- 100% of all mercury-containing lamps within the building and site management's control
- At least 100% of the durable goods waste stream (by weight, volume, or replacement value)
- At least 95% of waste (by volume) generated by facility alterations and additions

SECTION 4: PERFORMANCE EVALUATION

The party(s) responsible under Section (5) shall periodically evaluate the success of this policy's implementation. This may include providing a report on an annual basis to senior management within MarBorg Industries Headquarters. The annual reports will include an evaluation of the performance, safety, cost and environmental/public health benefits achieved through source reduction, reuse, recycling and composting. Reports should also relate the progress in meeting the stated objectives of MarBorg Industries Headquarters as set forth under Sections (2) and (3). Monthly reports, including waste recycling and/or disposal receipts, must be provided by the waste haulers/vendors (which is MarBorg) to allow for ongoing documentation, monitoring and assessment of the program results.

SECTION 5: RESPONSIBLE PARTY

The Executive Assistant shall implement this policy within MarBorg Industries Headquarters in coordination with other appropriate organization personnel, including but not limited to, MarBorg Industries Headquarters' Facility Manager, MarBorg Industries Headquarters' janitorial staff and owner representatives. The Executive



Assistant shall coordinate training, education and outreach programs throughout the organization, with the aim of promoting and maintaining the goals of this policy.

SECTION 6: PROCEDURES AND STRATEGIES

The following table lists recyclable wastes at the building site, their disposal method and handling procedures.

Source/Consumables	Disposal Method	Handling Procedure
Glass, Plastic, Metals (commingled)	Building occupants dispose of glass, plastics, and metals in blue comingle collection bins located in each office and at workstations.	Amounts are tracked by MarBorg and taken away on a daily basis (same schedule as current waste pickup) for recycling.
Mercury-containing Lamps	Electrician removes all lamps and returns unbroken lamps in cardboard boxes labeled “disposal”. These lamps are stored safely until pick up occurs. Pick up occurs once a box is filled.	MarBorg takes old lamps to their hazardous waste center for proper disposal. MarBorg is in accordance with local regulations on disposal of products containing mercury.
Paper/newspapers	Building occupants dispose of paper/newspapers in blue comingle collection bins located in each office and at workstations.	Amounts are tracked and taken away by MarBorg on a daily basis (same schedule as current waste pickup) for recycling.
Cardboard	Building occupants breakdown cardboard and deliver to the 95 gallon recycle bin in the front reception area.	Amounts are tracked and taken away by MarBorg on a daily basis (same schedule as current waste pickup) for recycling.
Batteries	Building occupants deliver batteries to battery waste bin located in the dispatch area.	Batteries are picked up by MarBorg and sent to their hazardous waste center on a weekly basis for proper disposal. MarBorg is in accordance with local regulations on disposal of products containing mercury.



Durable Goods (Electronic Waste and Furniture)	Building management provides a secure collection area to store durable goods that have reached the end of their life within the building but still have value and may be donated/re-used.	Amounts are tracked and taken away by MarBorg or sent to a re-use center on an as needed basis for recycling.
Building Materials	If 728 E. Yanonali Street #A were to go under construction, a MarBorg Construction Waste dumpster will be located on construction site.	Amounts are tracked and taken away by MarBorg and sent to their C&D center for recycling

SECTION 7: TIME PERIOD

This policy shall take effect on October 1, 2010 and shall continue indefinitely or until amended and/or replaced by a subsequent sustainable solid waste management policy.



MARBORG INDUSTRIES HEADQUARTERS

Green Cleaning Policy

October 2010

SECTION 1: SCOPE

This Policy and Plan addresses environmental best practices for cleaning the interior of MarBorg Industries Headquarters. Specifically, it addresses purchasing sustainable cleaning, hard-floor and carpet products, and entryway systems; procuring sustainable cleaning equipment; developing and implementing standard operating procedures for effective cleaning; promoting and improving hand hygiene; developing guidelines for handling cleaning chemicals; developing staffing and employee training requirements; collecting and addressing occupant feedback; and establishing procedures for use of chemical concentrates and dilution systems.

MarBorg Industries Headquarters is located at 728 East Yanonali Street #A, Santa Barbara, CA 93103.

SECTION 2: GOALS

The goal of this Green Cleaning Policy and Plan is to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particle contaminants, which adversely impact air quality, health, building finishes, building systems and the environment by:

- Provide on-going training for custodial staff on proper equipment and chemical handling/usage, cleaning procedures and frequencies, and the human health and environmental goals of the green cleaning policy.
- Assess occupant satisfaction with building cleanliness, maintenance and indoor air quality and determine areas for improvement by collecting feedback from building occupants and third party experts.
- Use safe cleaning procedures, ergonomically designed cleaning equipment and green cleaning chemicals to protect custodial staff health.
 - Purchase sustainable cleaning products for 30% of new purchases

SECTION 3: RESPONSIBLE PARTIES

Kathy Borgatello Koeper, the Executive Assistant, is responsible for developing and managing the implementation of the Green Cleaning Policy and Plan.

Personnel involved with various elements of the green cleaning program shall carry out their tasks according to this policy, and report all relevant activities to the aforementioned parties. To ensure an effective and coordinated effort, the building staff responsible for overseeing the Green Cleaning Policy and Plan shall review all proposed cleaning activities before implementation.



Green cleaning strategies for the property shall include actions performed by the following contractors:

Function	Company Name	Primary Contact	Phone
Custodial Services	Continental Janitorial	Rudy Castillo	805-687-0884
Custodial Services	EProCare	Marc Rodriguez	805-202-1667
Custodial Services	MarBorg	Kathy Koeper	805-963-1852

SECTION 4: QUALITY ASSURANCE CONTROL PROCESS

The Executive Assistant will evaluate the success of the Green Cleaning Policy and Plan every quarter. This evaluation will include producing and providing a report to senior management. Whenever possible, the annual report shall include an evaluation of the performance, safety, cost and environmental/public health benefits achieved as a result of its implementation.

Prior to implementation, the Executive Assistant will review all proposed cleaning activities. Upon reviewing proposed activities, the Executive Assistant shall determine if they meet the criteria of the Green Cleaning Policy and approve or deny action.

The Executive Assistant will communicate regularly with all cleaning staff, and conduct regular site inspections and evaluations to ensure that the Green Cleaning Policy and Plan is in place and functioning as intended. In addition to ongoing quality control measures, Kathy Borgatello Koeper, Executive Assistant, will review all practices and products quarterly to identify opportunities for improvement and expansion of environmentally friendly practices.

SECTION 5: CLEANING PRODUCTS

PERFORMANCE METRICS AND MEASUREMENT

The practices listed below shall be implemented, to the extent practicable, with a target goal of at least 30% of products complying, based on cost. The Responsible Party shall assign staff to track purchase rates of both compliant and non-compliant products.

PRACTICES TO OPTIMIZE USE OF SUSTAINABLE CLEANING PRODUCTS

Cleaning products and materials, including hard-floor and carpet-care products, used at MarBorg Industries Headquarters shall, when possible, meet the requirements listed below.



Product types subject to these requirements include, but are not limited to, bio-enzymatic cleaners, hard-floor cleaners, carpet cleaners, general-purpose cleaners, specialty cleaners, odor control, disinfectants, disposable janitorial paper products and trash bags, and hand soaps.

Green Cleaning, Purchase of Sustainable Cleaning Products and Materials Criteria:

- The cleaning products meet one or more of the following standards for the appropriate category:
 - Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaner use for industrial and institutional purposes
 - Environmental Choice CCD-110, for cleaning and degreasing compounds
 - Environmental Choice CCD-146, for hard-surface cleaners
 - Environmental Choice CCD-148, for carpet and upholstery care
- Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or Environmental Choice CCD-110, 146, or 148 shall meet at least one of the following standards for the appropriate category:
 - Green Seal GS-40, for industrial and institutional floor-care products
 - Environmental Choice CCD-112, for digestion additives for cleaning and odor control
 - Environmental Choice CCD-113, for drain or grease-trap additives
 - Environmental Choice CCD-115, for odor-control additives
 - Environmental Choice CCD-147, for hard-floor care
 - California Code of Regulations maximum allowable VOC levels for the specific product category
- Disposable janitorial paper products and trash bags meet the minimum requirements of one or more of the following programs for the applicable product category:
 - U.S. EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners
 - Green Seal GS-09, for paper towels and napkins
 - Green Seal GS-01, for tissue paper
 - Environmental Choice CCD-082, for toilet tissue
 - Environmental Choice CCD-086, for hand towels
 - Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers
- Hand soaps meet one or more of the following standards:
 - No antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (i.e., food service and health care requirements)
 - Green Seal GS-41, for industrial and institutional hand cleaners
 - Environmental Choice CCD-104, for hand cleaners and hand soaps

APPROVED PRODUCT LIST



The products listed below are approved for use. Products beyond those listed here must be submitted for approval prior to use.

Product Type	Manufacturer/Product Name	Sustainability Criteria Met
Toilet Tissue	Kimberly Clark/Scott® 100% RF Standard Roll	Green Seal/Recycled content
Paper Towels	Kimberly Clark/100% recycled content fiber multi fold	Green Seal/Recycled content
Toilet Seat Covers	Kimberly Clark/100% Recycled	Recycled content
All Purpose Cleaner	Buckeye/Tenacity	GS 37
Glass Cleaner	Buckeye/Star Spray	GS 37
Bathroom Cleaner (disinfectant)	Buckeye/Terminator	California Code of Regulations maximum allowable VOC levels for the specific product category
Hardfloor Care	Buckeye/True 7	GS 37
Floor Stripper	Buckeye/Penetrator	GS 40
Floor Finish	Buckeye/Verde	GS 40

SECTION 6: CLEANING EQUIPMENT

PERFORMANCE METRICS AND MEASUREMENT

All newly acquired cleaning equipment shall comply with the criteria listed below. The Responsible Party shall assign staff to track the percentage of all equipment that meets the criteria, based on cost or number of pieces of equipment. A target of 20% of equipment shall comply by the end date of the established LEED for Existing Buildings: Operations & Maintenance performance period.

PRACTICES TO OPTIMIZE USE OF SUSTAINABLE CLEANING EQUIPMENT

Purchase Criteria

All new equipment acquisitions shall comply with the requirements of IEQc3.4: Green Cleaning, Sustainable Cleaning Equipment:

- Vacuum cleaners meet the requirements of the Carpet and Rug Institute “Green Label” Testing Program— Vacuum Cleaner Criteria and are capable of capturing 96% of particulates 0.3 microns in size and shall operate with a sound level less than 70dBA.
- Carpet extraction equipment for restorative, deep cleaning is certified by the Carpet and Rug Institute’s “Seal of Approval” Testing Program for deep-cleaning extractors.



- Powered floor equipment—e.g., electric and battery-powered floor buffers and burnishers—is equipped with vacuums, guards and/or other devices for capturing fine particulates, and operates with a sound level less than 70dBA.
- Propane-powered floor equipment has high-efficiency, low-emission engines with catalytic converters and mufflers that meet California Air Resources Board (CARB) or Environmental Protection Agency (EPA) standards for the specific engine size, and operate with a sound level of less than 90dBA.
- Automated scrubbing machines are equipped with variable-speed feed pumps and onboard chemical metering to optimize the use of cleaning fluids. Alternatively, the scrubbing machines use only tap water with no added cleaning products.
- Battery-powered equipment is equipped with environmentally preferable gel batteries.
- Powered equipment is ergonomically designed to minimize vibration, noise and user fatigue.
- Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

Record-keeping

A log shall be kept for all powered cleaning equipment to document the date of purchase and all repair and maintenance activities. Vendor cut sheets for all equipment used onsite shall be stored onsite. When cleaning equipment replacement is necessary, acquisition dates and supporting documentation shall be retained to demonstrate that all newly acquired equipment complies with the specifications.

APPROVED EQUIPMENT LIST

The equipment listed below is approved in the event of new equipment acquisition. Equipment beyond that listed here must be submitted for approval prior to acquisition.

Equipment Type	Manufacturer/Model	Sustainability Criteria Met
Vacuum	Windsor Sensor / XP12 upright vacuum	CRI Green Label, 70 dBA, captures 99.97% at 0.3 microns
Buffer	Dayton/Bobcat	Captures particulates, 70 dBA

SECTION 7: HARD-FLOOR AND CARPET MAINTENANCE

PERFORMANCE METRICS AND MEASUREMENT

Floor-care maintenance shall consistently be performed according to written protocols, without exception. Quality control checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE HARD-FLOOR AND CARPET MAINTENANCE



- The floor and carpet maintenance program at MarBorg Industries Headquarters is designed to use few, or no, harmful chemicals; remove and eliminate irritating dust, dirt and other contaminants; and protect and preserve floors.
- To minimize chemical use, MarBorg Industries Headquarters has reduced the frequency of stripping or removing coatings to once year and is able to maximize the floor’s longevity, thereby conserving cleaning and floor restoration materials and minimizing occupants’ exposure to harmful chemicals.
- A written floor maintenance plan and log shall be maintained, which details the number of coats of floor finish being applied as the base and other applications (top coat), along with all relevant maintenance/restoration practices and the dates and duration of these activities.

SECTION 8: ENTRYWAY SYSTEMS

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting effective use of entryway systems shall be wholly adopted. Quality control checks shall be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE USE AND MAINTENANCE OF ENTRYWAY SYSTEMS

All entryways and entrances into MarBorg Headquarters are equipped with walk-off mats

- Walk-off mats at all primary entrances shall be cleaned daily. These systems shall be a minimum of 10 feet long in the direction of travel
- The walk-off mats shall be professionally cleaned on a monthly basis and thoroughly vacuumed onsite on a daily basis. The flooring beneath the mats shall be vacuumed and mopped on a weekly basis as well
- Walk off mats shall contain recycled content
- Custodians are to check for wear and tear daily and notify MarBorg immediately when replacement is needed.

SECTION 9: HAND HYGIENE

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting hand hygiene shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE HAND HYGIENE

- All restroom facilities shall include appropriate hand soaps. (See Section 5.)
- Per regulations, hand-hygiene notices will be placed in all employee rest rooms.
- Hand gel dispensers will be place in workstation area for staff to use

SECTION 10: HANDLING AND STORAGE OF CLEANING CHEMICALS

PERFORMANCE METRICS AND MEASUREMENT



Protocols governing safe handling and storage of cleaning chemicals shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE HANDLING AND STORAGE OF CLEANING CHEMICALS

The following protocols have been established to mitigate spills, leaks and mismanagement.

Storage

- Cleaning chemicals are stored in a single-locked janitorial closet. Workers access chemicals at the beginning of their shift and as needed.
- Custodians will only mix chemicals using the Action Control System II. Custodians will never mix using their own methods.

Chemical Dilution systems (See Section 11)

MSDS Storage

- The cleaning chemical supplier is required to provide accurate MSDSs for all chemicals delivered to the building.
- MSDSs are filed, in duplicate, in the chemical storage room and the manager's office in clearly labeled binders.
- The cleaning chemical supplier maintains a toll-free hotline that can be called in the event of spills or accidents to access safety data and protocols.
- All custodians will know where the MSDS sheets are stored in their custodial closet.

Emergency Procedures

SPILLS

- Notify people in the immediate area about the spill.
- Evacuate all nonessential personnel from the spill area.
- Attend to anyone who may have been exposed or contaminated.
- If the spilled material is flammable, turn off ignition and heat sources.
- Avoid breathing vapors from the spilled material and use a respirator if necessary.
- Maintain or establish exhaust ventilation with mechanical systems or portable fans if it is safe to do so. This does not mean opening doors or windows.
- Take appropriate steps to confine and limit the spill if this can be done without risk of injury or contamination

SECTION 11: USE OF CHEMICAL CONCENTRATES AND DILUTION SYSTEMS

PERFORMANCE METRICS AND MEASUREMENT



Dilution systems and chemical concentrates shall be wholly utilized for the following product types:

- Buckeye Star Spray
- Buckeye Terminator
- Buckeye True 7
- Buckeye Tenacity

PRACTICES TO OPTIMIZE USE OF CHEMICAL CONCENTRATES AND DILUTION SYSTEMS

Chemical concentrates and dilution systems are used according to the procedures below to minimize risk to staff and occupants, and to conserve resources.

Dilution System Description

The dilution system installed in MarBorg Industries Headquarters is a Buckeye Action Control System II. The system attaches directly to the faucet and ensures proper dilution of each chemical. The system is color-coded making it very user-friendly.

Protocol for Use

See attached Action Control System Instructions booklet. This booklet is provided in the custodial closet in case custodians need to use it as a reference. Each custodian is trained on how to operate the Action Control System.

Maintenance

EProCare representative, Marc Rodriguez, is MarBorg's custodial sales representative. Per his contract he will ensure the dilution system is maintained and working at all times and check in with MarBorg quarterly and service the dilution system.

SECTION 12: VULNERABLE BUILDING OCCUPANTS

To protect vulnerable building occupants, such as pregnant women, children, asthmatics, elderly occupants, individuals with allergies and highly sensitive individuals, cleaning staff from MarBorg Industries Headquarters shall use only low/no VOC cleaning products; they shall perform routine cleaning and floor restoration activities after working hours when the majority of occupants have left the building. MarBorg Industries Headquarters only uses 3 cleaning chemicals and 1 floor product, thus limiting the number of cleaning chemicals used in the building. MarBorg shall maintain a high level of cleanliness thus minimizing the presence of irritants.

SECTION 13: STAFFING AND TRAINING

PERFORMANCE METRICS AND MEASUREMENT



All cleaning personnel shall receive regular training. Vendors shall supply evidence of compliance with training requirements prior to contract award or renewal.

PRACTICES TO OPTIMIZE STAFFING AND TRAINING

All cleaning staff and managers shall receive environmental safety and health training, addressing, at minimum, hazards associated with the use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.

Training Topics

- Employee safety and health compliance as it relates to the cleaning program
- Regulatory compliance standards—OSHA, EPA, and other local, state, and federal rules and regulations
- Unsafe attitudes and conditions in the work place through Job Safety Analysis—OSHA JSA or JHA (Job Hazard Analysis)
- Employee performance improvement, such as accident prevention and record-keeping
- Compliance with health and safety rules, and regulation and confidentiality issues
- Safe chemical storage and handling
- Disposal and recycling of cleaning chemicals, dispensing equipment and packaging

Annual Training Hours

All workers shall receive 4 hours of training quarterly.

Staffing Plan

To meet cleaning objectives within the building, minimum staffing requirements must be met. Factors such as occupancy rates, seasonal variations and other considerations should be taken into account when adjusting the staffing plan.

Under typical conditions, total cleaning staff time shall be not less than 6 hours per day. Generally, 2 staff members work 3 hours per day to meet these requirements.

SECTION 14: OCCUPANT FEEDBACK AND EVALUATION OF NEW TECHNOLOGIES

PERFORMANCE METRICS AND MEASUREMENT

All guests and employees shall have a mechanism by which to provide feedback on cleaning practices.

PRACTICES TO OPTIMIZE OCCUPANT FEEDBACK AND EVALUATE NEW TECHNOLOGIES

MarBorg Industries Headquarters has implemented an electronic collection system for gathering occupants' feedback about the green cleaning program. Occupants are encouraged to alert the management to any



issues relating to the green cleaning program. In addition, management regularly researches and integrates new green cleaning technologies into the building's green cleaning procedures.

SECTION 15: TIME PERIOD

This policy shall take effect on October 1, 2010 and shall continue indefinitely or until amended and/or replaced by a subsequent green cleaning policy.

MARBORG INDUSTRIES HEADQUARTERS

High Performance Green Cleaning Policy



October 2010

SECTION 1: INTRODUCTION

Using green sanitation methods to clean building interiors is beneficial for the health of both the environment and building occupants. Selecting cleaning products that do not contain potentially hazardous contaminants reduces the ecological impact of products that end up in our environment. Green cleaning practices also improve indoor air quality, which can reduce incidents of building-related illness and increase worker productivity.

SECTION 2: SCOPE & APPLICABILITY

The MarBorg high performance cleaning program (“program” or “HPCP”) applies to all interior spaces at the MarBorg. It is intended to inform facility managers and educate building service staff on how to achieve green housekeeping requirements mandated by MarBorg Green Cleaning Policy (referred to as the “policy”). The policy defines procedures, products and equipment used by the Custodial Department to clean the interior of the MarBorg in a manner that limits the introduction of hazardous toxins, chemicals and particulates into the building. The policy also provides guidance and support for the safe and effective removal of contaminant and particulate build up that occurs through typical building operations. The HPCP and the policy are complementary components to the MarBorg green cleaning effort; both are applicable at MarBorg at all times. Please refer to the policy for additional information.

SECTION 3: GOALS

1. Maintain a safe and hygienic interior building environment using sustainable cleaning products that protect indoor air quality and occupant health.
2. Use safe cleaning procedures, ergonomically-designed cleaning equipment, and green cleaning chemicals to protect custodial staff health.
3. Provide ongoing training for custodial staff on proper equipment and chemical handling/usage, cleaning procedures and frequencies, and the human health and environmental goals of the green cleaning policy.
4. Assess occupant satisfaction with building cleanliness, maintenance and indoor air quality and determine areas for improvement by collecting feedback from building occupants.
5. Purchase green cleaning products, as defined in the policy, for at least 90% of product needs.
6. Prohibit all products containing aerosols.
7. Purchase 100% post-consumer recycled content bathroom paper products, including toilet paper and paper towels.
8. Purchase sustainable custodial equipment, as defined in the policy, for 100% of cleaning equipment purchases.



9. Practice conservation and reduce custodial waste by 20%.

SECTION 4: PERFORMANCE METRICS

1. The Executive Assistant will conduct annual audits of custodial closets and practices to ensure that the policy is being upheld and goals are being worked toward.
2. The Executive Assistant will track and report all purchases of products and equipment relevant to this policy to demonstrate progress toward the product purchasing goals.
3. Feedback provided in suggestion boxes will be reviewed regularly in order to assess occupant satisfaction and concerns with the green cleaning procedures. This will assist in evaluating whether building users are satisfied with cleanliness, maintenance, and indoor air quality, and whether these factors are improving or declining over time.

SECTION 5: CLEANING PRODUCTS AND EQUIPMENT

Please see the MarBorg Green Cleaning Policy for approved cleaning products and equipment.

SECTION 6: STANDARD OPERATING PROCEDURES

Please see the MarBorg Green Cleaning Policy for approved standard operating procedures.

SECTION 7: STAFFING

The MarBorg employs 2 part time day time custodians and 1 weekend/evening custodian. To ensure a clean environment that promotes the health and well-being of building occupants and users, MarBorg requires the following:

- Custodians are provided with daily scope of work checklists to insure all tasks are completed. All custodians are given a procedure list to follow and complete.
- Weekly inspections are performed by the Custodial Supervisor to ensure expectations and requirements for cleanliness are being met on an ongoing basis.
- Custodial staff meets daily with the Custodial Supervisor to discuss any issues. When the supervisor is away a communication log is available to help pass on important information to communicate to one another.

SECTION 8: MANDATORY STAFF TRAINING

All custodial staff employed receive training on green cleaning protocols, proper usage of chemical dilution systems and other equipment, proper chemical handling/usage, preferred cleaning procedures and frequencies, chemical disposal and recycling, and the human health and environmental goals of the Green Cleaning Policy. Training sessions also teach ergonomic use of machinery to maximize productivity and reduce operator fatigue/discomfort.



Custodians are trained by their supervisor and/or by the product distributor. The training adheres directly to the manufacturer's specifications for the use of the product or equipment. Each employee must show competence in the use of the product and/or equipment. Follow up is performed at least twice per year – after the initial training and again during performance reviews – to ensure staff is safely and effectively using the correct methods when performing their job duties.

SECTION 9: QUALITY ASSURANCE/QUALITY CONTROL

The MarBorg places high strategic value on maintaining sustainable operations and therefore will monitor the facility for adherence to both the HPCP and Green Cleaning Policy by performing regular quality assurance inspections. The Executive Assistant performs weekly inspections to ensure expectations and requirements for cleanliness are being met on an ongoing basis. This position is also available to receive occupant feedback and follow up where building occupants find building cleanliness fails to meet expectations.

Additionally, satisfaction with building cleanliness, maintenance, and indoor air quality shall be assessed regularly by collecting feedback from building occupants. Suggestion boxes are placed throughout the building to collect building occupant suggestions and feedback to gauge occupants' satisfaction with custodial services and cleanliness. This feedback will also be considered in reviewing products and equipment used in the facility.

Feedback from custodial staff on green cleaning technologies, procedures and processes is also gathered in order to evaluate the program's successes and determine opportunities for improvement.

SECTION 10: CONTINUOUS IMPROVEMENTS

MarBorg will conduct ongoing evaluations and testing of policy compliant green cleaning products and equipment in order to find suitable sustainable products and processes to replace all conventional cleaning products and procedures. See the Responsible Parties section of this plan for information regarding responsibility for testing and continuous improvements.

SECTION 11: RESOURCES FOR IMPLEMENTATION

MarBorg's Green Cleaning Policy, located in the appendix, is the best guidance resource for the effective implementation of high-performance cleaning activities at the Science Center. Additionally, materials handed out at mandatory staff training sessions provide detailed information for implementing the principles of green cleaning in the field. The following online resources can provide additional background and guidance:

- The Green Cleaning Network – www.greencleaningnetwork.org
- The Ashkin Group – www.ashkingroup.com/homenew.html
- Johnson Diversity – www.johnsondiversey.com/Cultures/en/Content/Our+Expertise/Green+Cleaning.htm

SECTION 12: RESPONSIBLE PARTIES

The Executive Assistant is the primary responsible party for all aspects of the HPCP.



Responsibilities include:

- Overseeing the implementation of the Green Cleaning Policy and HPCP.
- Performance measurement.
- Ongoing product/equipment testing and evaluations.
- Identification of conventional products and equipment being used at the building that can be replaced with environmentally-preferable products.
- Designing or contracting mandatory custodial staff training sessions that address all material outlined in Mandatory Staff Training section of this policy.

Please contact the Custodial Supervisor with questions concerning the high performance cleaning program or other building cleaning or custodial questions.

Kathy Borgatello Koeper
MarBorg Industries
Executive Assistant/Owner
805-963-1852

MARBORG INDUSTRIES HEADQUARTERS
Water Efficiency Economic Assessment Policy



October 2010

PURPOSE

The purpose of this policy is to ensure that a water efficiency economic assessment is performed at MarBorg Industries Headquarters for any future water fixture upgrades at the building and that water use reduction strategies are explored at this time.

SECTION 1: POLICY SCOPE

This plan applies to all indoor potable water fixtures and fittings within:
MarBorg Industries Headquarters
728 Yanonali Street #A
Santa Barbara, California 93103

SECTION 2: POLICY GOALS

This policy mandates an economic assessment of conversion to high-performance plumbing fixtures and fittings as part of any future indoor plumbing renovations. Any replacement fixtures will meet or exceed the following UPC/IPC Standards and MarBorg Industries Headquarters will strive to meet the following EPA Water Sense Standards wherever possible:

Fixture	UPC/IPC Standards	EPA Water Sense Standards
Water Closet	1.6 GPF	1.28 GPF
Urinal	1.0 GPF	0.125 GPF or Waterless (0 GPF)
Public Lavatory Faucet	0.5 GPM	0.5 GPM
Private Lavatory Faucet	2.2 GPM	1.5 GPM
Kitchen/Janitorial Sink	2.2 GPM	2.2 GPM
Shower	2.5 GPM	1.0 GPM

SECTION 3: PERFORMANCE METRIC AND TARGETS

Water efficiency economic assessment shall be performed as part of any future indoor plumbing renovations, balancing economic analysis with water efficiency goals. Based on MarBorg’s sustainability goals, they have set the following water efficiency goals:

1. 30% reduction in indoor plumbing fixture and fitting potable water use from the LEED for Existing Buildings: Operations & Maintenance baseline.



SECTION 4: RESPONSIBLE PARTY

The Executive Assistant shall implement this policy within MarBorg Industries Headquarters in coordination with other appropriate personnel, including but not limited to, MarBorg Industries Headquarters' Owner/Manager and any procurement staff. The Executive Assistant shall ensure that this policy is distributed to all relevant personnel, with the aim of promoting and maintaining the goals of this policy.

SECTION 5: PERFORMANCE EVALUATION

The best management practices described in this plan will be evaluated annually for compliance and the outcome submitted to senior management.

SECTION 6: PROCEDURES AND STRATEGIES

Any water efficiency economic assessment will take into account the following first costs and operational savings:

1. Equipment costs
2. Installation labor
3. Water utility savings
4. Sewage utility savings
5. Hot water energy savings

SECTION 7: TIME PERIOD

This policy shall take effect on October 1, 2010 and shall continue indefinitely or until amended and/or replaced by a subsequent policy.

Signed and executed on this ___ day of _____, 2010.

MarBorg Industries

By:

Kathy Borgatello Koeper

RELEVANT DEFINITIONS



Nonpotable Water is water that is not suitable for human consumption without treatment that meets or exceeds EPA drinking water standards.

Plumbing fixtures and fittings are receptacles, devices, or appliances that are either permanently or temporarily connected to the building's water distribution system and receive liquid or liquid-borne wastes and discharge wastewater, liquid-borne waste materials, or sewage either directly or indirectly to the drainage system of the premises. This includes water closets, urinals, lavatories, sinks, showers and drinking fountains.

Potable Water is water that is suitable for drinking and is supplied from wells or municipal water systems.

Substantial completion is defined as either initial building construction or the last plumbing renovation of all or part of the building that included a 100% retrofit of all plumbing fixtures and fittings as part of the renovation.

MARBORG INDUSTRIES HEADQUARTERS



Preventative Maintenance plan

FURNACE

- Inspect flue (where accessible) for proper clearance from combustibles, condensation leakage, correct rise- to- run ratio, ensure no obstructions
- Verify proper operation of inducer motor and pressure switch
- Visually inspect heat exchanger for cracks
- Inspect fire-box for signs of flame rollout, soot or burnt paint
- Verify proper startup and shutdown sequence of gas valve
- Measure manifold gas pressure
- Verify flame color
- Vacuum burners and heat exchanger tube
- Replace pre-filters 4 times per year
- Inspect fan blower wheel and motor and clean if excessively dirty
- Inspect bearings, pulleys, belts
- Change belts
- Grease bearings and lubricate motors
- Record fan motor amps and verify proper amp draw
- Inspect condition of capacitor
- Test furnace safeties
- Inspect and tighten all electrical connections, verify no corrosion or burn marks on circuitry
- Measure temperature rise across furnace

SPLIT SYSTEM AIR CONDITIONER AND HEAT PUMP

- Inspect (where accessible) evaporator coil and evaporator motor
- Record evaporator fan motor amps
- Inspect insulation on refrigerant lines
- Inspect TXV and verify bulb is properly connected to suction line and insulated if out of air stream
- Check evaporator drain pans for proper drainage
- Clear drain traps
- Verify operation of condensate pump
- Check compressor amps, low side pressure, high side pressure, and refrigerant charge
- Clean condenser coil and check fin condition
- Look for signs of refrigerant leaks



- Inspect condition of condenser fan and motor
- Record condenser fan motor amps and verify proper amp draw
- Inspect and tighten all electrical connections, verify no corrosion or burn marks on circuitry
- Check all contactors for burn marks and pits
- Inspect for excessive equipment noise or vibration
- Replace pre-filters 4 times per year

THERMOSTAT/OPERATION

- Check thermostat for proper on/off cycling of heating and cooling
- Measure heating supply air temperature (winter)
- Measure cooling supply air temperature (summer)
- Program thermostat if customer requests

PACKAGE GASE/ELECTRIC ROOFTOP UNIT

Cooling:

- Inspect (where accessible) evaporator coil and evaporator motor
- Record evaporator fan motor amps
- Inspect TXV and verify bulb is properly connected to suction line and insulated if out of air stream
- Check evaporator drain pans for proper drainage
- Clear drain traps, make sure they are primed
- Check compressor amps, low side pressure, high side pressure, and refrigerant charge
- Clean condenser coil and check fin condition
- Look for signs of refrigerant leaks
- Inspect condition of condenser fan and motor
- Record condenser fan motor amps and verify proper amp draw
- Inspect for excessive equipment noise or vibration
- Inspect fan blower wheel and motor and clean if excessively dirty
- Inspect bearings, pulleys, belts
- Change belts
- Grease bearings and lubricate motors
- Inspect and tighten all electrical connections, verify no corrosion or burn marks on circuitry
- Check all contactors for burn marks and pits
- Inspect condition of capacitor
- Verify operation of condenser fan cycling devices



- Replace pre-filters 4 times per year

Gas Heating:

- Inspect flue
- Verify proper operation of inducer motor and pressure switch
- Visually inspect heat exchanger for cracks
- Inspect fire-box for signs of flame rollout, soot or burnt paint
- Verify proper startup and shutdown sequence of gas valve
- Measure manifold gas pressure
- Verify flame color
- Vacuum burners and heat exchanger tube
- Test furnace safeties
- Inspect and tighten all electrical connections, verify no corrosion or burn marks on circuitry
- Replace pre-filters 4 times per year

AIR COOLED CONDENSER/COMPRESSOR

- Check compressor amps, low side pressure, high side pressure, and refrigerant charge
- Inspect TXV and verify bulb is properly connected to suction line and insulated if out of air stream
- Check compressor oil level and condition
- Clean condenser coil and check fin condition
- Look for signs of refrigerant leaks
- Inspect service valves for leaks
- Inspect condition of condenser fan and motor
- Record fan motor amps and verify proper amp draw
- Inspect for excessive equipment noise or vibration
- Inspect sight glass for bubbles and moisture
- Check temperature differential across liquid line filter drier
- Inspect and tighten all electrical connections, verify no corrosion or burn marks on circuitry
- Check all contactors for burn marks and pits
- Verify operation of condenser fan cycling devices

LIGHTING

Quarterly basis:

- Dust lamps and clean lens surfaces to enhance lighting performance.
- Inspect lighting at regular intervals, and group re-lamping effort when lamps begin to fail.



- Replace lenses if they appear yellow
- Replace any burned-out lamps, and properly dispose of the lamps.

Yearly

- Repaint (every 2-3 years) with a light color or clean walls to increase reflectivity



Integrated Pest Management Plan October 2010

SECTION 1: STATEMENT OF PURPOSE

The purpose of this Integrated Pest Management (IPM) plan is to guide the use of environmentally sensitive pest management strategies and least-toxic control methods at MarBorg Industries Headquarters to enhance the health and safety of building users and the natural environment. IPM is defined as managing outdoor pests (plants, fungi, insects and/or animals) in a way that protects human health and the surrounding environment while improving economic returns through the most effective, least-risk option. Core elements of IPM include:

- Use of least-toxic chemical pesticides
- Minimum use of chemicals
- Use of chemicals and pesticides only in targeted locations and for targeted species
- Routine inspection and monitoring
- Regular review of practices ensure compliance and determine areas for improvement
- Proactive communication

To ensure building users are informed and empowered to care for their own health with regard to pest management activities, the plan includes procedures for notifying occupants and visitors in advance of any pesticide application other than a least-toxic pesticide.

SECTION 2: GOALS

The goals of the IPM program at MarBorg Industries Headquarters are:

1. Protect human health and the surrounding environment by employing a range of preventative strategies and using least-toxic products for pest control and eradication.
2. Inspect and monitor pest populations and locations to enhance control strategies.
3. Minimize the quantity and toxicity of chemicals used for pest management.
4. Minimize environmental impacts by using species-specific pesticides and targeting application areas carefully.
5. Establish clear criteria for acceptable circumstances in which using a pesticide other than a least-toxic pesticide is necessary; toxic pesticides shall only be used when there is a threat to public health and safety, or to prevent economic or environmental damage, and only after other alternatives have been implemented and are shown to be ineffective.
6. Provide building occupants and visitors with advanced notice of IPM activities involving use of a pesticide other than a least-toxic pesticide.



SECTION 3: STRATEGY

The IPM promotes the use of a range of preventative and non-chemical approaches to control pest populations and stave off infestation. If an infestation with unacceptable impacts occurs, thereby warranting additional treatment, IPM then favors the use of least-toxic pesticides. The targeted application of a toxic pesticide is allowed only after all other reasonable non-toxic options are exhausted. This plan outlines preventative best practices and eradication strategies approved for use at MarBorg Industries Headquarters. Provisions for the use of least-toxic pesticides, and toxic chemicals when necessary, are outlined should a pest infestation occur.

SECTION 4: SCOPE

The IPM applies to the building interior and grounds for MarBorg Industries Headquarters. All pest control vendors will follow best practices for pest management and uphold MarBorg Industries Headquarters' commitment to environmental stewardship by implementing the following operational plan for integrated pest management. This plan is applicable at all times at MarBorg Industries Headquarters.

SECTION 5: DEFINITIONS

Emergency – A pest outbreak that poses an immediate threat to public health or will cause significant economic or environmental damage.

Least-toxic pesticide – Any pesticide product that meets San Francisco's Tier 3 hazard criteria is low hazard, and considered a least-toxic pesticide. Tier 3 products are the next line of defense against pests after preventative measures are exhausted.

Pesticide – Any substance, or mixture of substances, used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, which may be detrimental to vegetation, humans, or animals.

Tiered Materials – The City of San Francisco's pesticide classification system based on hazard potential. Products are evaluated against comprehensive list of hazard criteria including carcinogenicity, reproductive toxicity, endocrine disruption, acute toxicity, hazard to birds/fish/bees/wildlife, persistence, and soil mobility, and are placed within the Tier structure based on the evaluation results.

- Tier 1: Highest concern
- Tier 2: Moderate concern
- Tier 3: Lowest concern
- Tier 4: Insufficient information available to assign to above tiers



SECTION 6: RECORD KEEPING

Monitoring the effectiveness of the IPM plan over time requires diligent tracking of several items: pest populations and locations; management strategies employed; quantities and types of chemicals and products used; and the outcome of pest management activities. The pest control vendor is responsible for maintaining records that include the information below. See the appendix for the Record Keeping form that shall be used at MarBorg Industries Headquarters to standardize all record keeping activities.

1. Target pest
2. Prevention and other non-chemical methods of control used
3. Type and quantity of pesticide used
4. Location and date of the pesticide application
5. Name of the pesticide applicator
6. Application equipment used
7. Summary of results

SECTION 7: PERFORMANCE MEASUREMENTS

The performance of the IPM program shall be compiled from IPM records and analyzed on an annual basis. An IPM report identifying the types of pest problems encountered at the building and the types and quantities of all pesticides used shall be generated by the pest control vendor and presented to Executive Assistant Kathy Borgatello Koeper for review each year. The following metrics shall be tracked throughout the year and documented in the report to evaluate the IPM plan at MarBorg Industries Headquarters over time:

1. The severity and location of all major pest infestations
2. IPM measures taken
3. The amount of each pesticide product used by volume
4. Dates, pest species, location and control method for emergency pest outbreaks

A representative from SB Pest Control Company will also hold quarterly meetings to discuss IPM and performance.

SECTION 8: QUALITY ASSURANCE/QUALITY CONTROL

IPM performance measures will be evaluated at quarterly meetings with the pest control vendor. Regular and emergency services provided onsite will be reviewed at these meetings. Pest control vendors are required to follow all aspects of this IPM plan. Documentation and verification of plan implementation will be verified at all quarterly meetings.

SECTION 9: PEST CONTROL CONTRACTORS



All pest control vendors contracted to work at MarBorg Industries Headquarters are responsible for adhering to this plan. When MarBorg Industries Headquarters enters into a new pest control contract or extends the terms of an existing contract that authorizes the application of pesticides in the building interior or grounds, the contract shall require that the contractor comply with this IPM plan. The contract documents shall also require the contracted company to maintain records in accordance with the IPM plan and submit this information to Executive Assistant Kathy Borgatello Koeper when requested. All pest control contractors will also be asked to submit a description of their staff IPM training and education programs.

SECTION 10: BUILDING USER NOTIFICATION

Notifying building users of pesticide applications other than a least-toxic pesticide is a critical component of the IPM plan. Providing occupants and visitors with the appropriate information at the appropriate time enables individuals to take precautions as they see necessary to protect their personal health. At MarBorg Industries Headquarters, a 72-hour advance notice to building occupants is required for the application of any pesticide other than a least-toxic pesticide. Advance notice procedures shall take the following form:

1. Post signs at least 3 business days before application of the pesticide product, and leave signs in place for at least 3 business days after application.
2. Post signs at every entry point to where the pesticide is applied, if applied in an enclosed area. In highly visible, open area locations, post signs around the perimeter of the area where the pesticide is applied.
3. Signs must be standardized and easily recognizable. See the appendix for the approved notification sign template.
4. Each sign must contain the following information:
 - a. The name and active ingredient of the pesticide product
 - b. The targeted pest
 - c. The application date
 - d. The signal word indicating the toxicity category of the pesticide product
 - e. The name and contact information of an individual that is responsible for fielding questions regarding the application.
5. Each sign must be in both English and Spanish.
6. Copies of posted signs shall be retained for record-keeping purposes for one year.

SECTION 11: EMERGENCIES

A pest outbreak is considered an emergency when it poses an immediate threat to public health or will cause significant economic or environmental damage. Emergency pesticide applications require a 24-hour advance notice to building users in accordance with procedures numbered 2 through 6 in Section 10 of this plan.

SECTION 12: GENERAL PREVENTATIVE PRACTICES



General preventative practices are simple housekeeping and landscaping procedures that eliminate sources of food, water and shelter that attract pests to the building grounds and interior. MarBorg Industries Headquarters shall use the following methods as the first and primary means for controlling pests and preventing outbreaks:

Landscaping and Site

1. Use mulch and other landscaping best practices to promote soil and plant health.
2. Use weed-free soil amendments.
3. Maintain and plan landscape features to eliminate safe havens for pests and rodents.
4. Keep vegetation trimmed 18 inches from the building and fill area with stones or similar material to prevent nesting.
5. Clean up plant debris, especially from fruit-bearing trees.
6. Remove invasive plants that are known to harbor or provide food for pests.

Building Infrastructure

1. Maintain the building envelope by weather-stripping around windows and doors, installing door sweeps, screens or other barriers, and sealing cracks and crevices to prevent pests from entering the building.
2. Remove hiding places by cleaning up clutter such as cardboard boxes, crates, used tires, wood piles.
3. Manage trash receptacles and dumpster areas for clutter and cleanliness to minimize food sources and hiding places.
4. Eliminate water sources by fixing leaky pipes, cleaning out drains and rain gutters, and preventing water from pooling on concrete or soil after irrigating landscape.
5. Rinse all food and beverage containers before placing in recycling bins.

SECTION 13: SPECIES-SPECIFIC CONTROL PRACTICES

The following pest species are common to the building grounds. The strategies specified in the table below are the preferred control methods to be used at MarBorg Industries Headquarters.

Common Species	Control Strategies
Ants	<ul style="list-style-type: none"> • In areas where ants are present, wipe the areas down with soapy water in order to prevent the formation of major scent trails. If there already is an established trail, wipe backwards from the food source to the entrance of the trail. • Seal all entry points to the building – ants will give up trying to find a way through after 1-2 days. Temporary blockades can be made using sticky substances, such as petroleum jelly and chili powder, cinnamon, or boric acid.



	<ul style="list-style-type: none"> • Always keep opened foodstuffs in sealed containers, or store them in the refrigerator or freezer. Clean out kitchen cabinets, drawers, and shelves to remove crumbs and stains. Keep sinks and worktops clean and dry. • Baits are best placed in the path of an ant trail and then removed after the ant activity stops, before they lure ants from another colony to the area. • Prune branches close to the building and removed fences or anything that might create a bridge for the ants. • Low-toxicity compounds to control ants include boric acid and diatomaceous earth (DE), a chalk-like powder consisting of the fossilized remains of diatoms, a type of hard-shelled algae.
Aphids	<ul style="list-style-type: none"> • Manage sap-sucking mites and whiteflies by releasing predatory mites, ladybugs, and lacewings onto the grounds several times over a period of weeks. • Consider using parasitic wasps to control scales on trees, shrubs, and flowers. • If it is difficult to obtain supplies of beneficial insects for release into the garden, then purchase a branded lure that simulates the scent of aphids and attracts ladybugs and lacewings to the area.
Caterpillars	<ul style="list-style-type: none"> • Bacterial insecticides derived from natural ingredients are available to control caterpillars.
Mosquitoes	<ul style="list-style-type: none"> • The best control method for mosquitoes is to destroy their habitat. • Because mosquitoes like moisture and lay their eggs in standing water, it is important not to leave flower pots, buckets, plastic sheeting, or other open containers outside collecting water. Ensure that any rainwater collectors are fitted with lids. • Clear debris from gutters and drains to ensure that there is no standing water after rain, and drain unused pools or fountains so that the water cannot become stagnant. • Drain or fill depressions, mud flats, and other areas that might hold water. • Repair leaking taps and air-conditioning units so that puddles cannot form, and ensure that septic tanks and sewage systems are properly maintained and in good working order. • Avoid over-irrigating lawns and gardens, and keep weeds and grass (where the insects rest) trimmed. • If you have a pond or lake on the building grounds, fill it with mosquito-eating fish, such as top-feeding minnows or goldfish; they will eat the mosquito larvae before they mature into adults.



	<ul style="list-style-type: none"> • To prevent mosquitoes from coming indoors, fit fine-mesh screens to porches, doors, and windows. • If these measures are insufficient, area repellents such as citronella candles, coils, or sprays will repel mosquitoes from porches, patios, and other unscreened outdoor areas, although they only work well when the air is still.
Rodents	<ul style="list-style-type: none"> • Rodent control should start with a survey to determine the source of the problem and the conditions that encourage the infestation. Following the survey, implement a program to kill the rodents by removing their sources of food and water, eliminating their place of refuge and making it rodent-proof, and educating and obtaining the cooperation of employees. If the food supply is removed before you eradicate them, the rodents will migrate to other areas, making elimination more difficult. • Openings in building foundations and walls should be closed or screened with wire mesh that has holes no more than 1.25 cm (0.5 in) wide. Where pipes enter masonry, force heavy hardware cloth or steel wool into the opening, and then fill it with concrete. • Continuous surveillance is necessary, and places where rodents have been gnawing to gain entry to a building should be sealed with metal flashing. • Doors are particularly vulnerable to rodent entry, so ensure that external doors and windows close tightly with no gaps at the bottom. • Materials stored in the open, in sheds, or in buildings should be stacked at least 30 cm (1 ft.) above the ground. • Stringent waste disposal practices should be observed; secure all waste in closed containers and not just plastic bags. • Wash recycling and refuse areas regularly. Make sure composting bins are designed to prevent rodents from entering. • Traditional rodent traps, or snap traps, kill instantly. If trapping efforts fail, it is usually due to too few traps being used. • Bait should be sticky to ensure that the mouse triggers the trap mechanism, even if it only lightly touches the bait. Mice prefer peanut butter or chocolate to cheese. Bacon, oatmeal, or apples can also be used as bait. • An alternative to snap traps is a battery-operated trap that generates a high-voltage shock once the rat or mouse is inside. The design is relative safe and can be used in areas where children, pets, or wildlife may be present.



Slugs and snails	<ul style="list-style-type: none">• There are various non-chemical solutions to eliminate slugs and snails, including putting salt or sharp shingle around vulnerable plants, drowning them in beer, or hand-picking them and destroying them. Elemental copper bands also repel snails and slugs.
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SECTION 14: TIER 3 MATERIALS – LEAST TOXIC PESTICIDES

Chemical pesticides are considered a last resort under the tenets of integrated pest management. This control strategy is to be used at MarBorg Industries Headquarters only after general preventative practices and non-chemical options are exhausted. Pesticides that meet the requirements of Tier 3 are considered least-toxic and may be applied without building user notification when chemical product use is required. To qualify as a Tier 3 material, all of the following statements must be true:

1. Product contains no known, likely, or probable carcinogens
2. Product contains no reproductive toxicants (California Prop 65 list)
3. Product contains no ingredients listed by Illinois EPA as known, probable, or suspect endocrine disrupters
4. Active ingredients has soil half-life of thirty days or less
5. Product is labeled as not toxic to fish, birds, bees, wildlife, or domestic animals

Due to its high toxicity, rodent bait is not considered least-toxic under any circumstance.

SECTION 15: TIER 2 MATERIALS - TOXIC PESTICIDES

Should both preventative methods and least-toxic pesticides prove ineffective at suppressing an emergency pest infestation, a toxic pesticide that meets the requirements of Tier 2 may be applied.

SECTION 16: RESPONSIBLE PARTIES

The Executive Assistant is responsible for overseeing the implementation of the IPM plan and ensuring contractor compliance.

The Executive Assistant is responsible for supervising record keeping and performance measurement, which is primarily the responsibility of contracted pest control companies.

The Executive Assistant is responsible for quality assurance/quality control processes. This position shall verify that the plan is being implemented consistently and correctly, that performance persists over time, and that performance measurement methods truly reflect actual outcomes.

All pest control vendors contracted to work at MarBorg Industries Headquarters are responsible for adhering to this policy.



SECTION 17: CONTACT INFORMATION

Please contact the Executive Assistant, Kathy Koeper Borgatello at 805-963-1852 with questions concerning this plan, pest sightings, or other questions related to integrated pest management.

SECTION 18: TRAINING

All pest control contractors hired for MarBorg Industries Headquarters will submit a description of their staff IPM training and education programs.

SECTION 19: RESOURCES

The City of San Francisco has an award-winning Integrated Pest Management program.

www.sfenvironment.org/our_programs/topics.html?ti=1

The Integrated Pest Management Institute of North America, Inc. provides news, standards, and information about upcoming IPM conferences and webinars.

www.ipminstitute.org

Beyond Pesticides is a non-profit organization committed to pesticide safety.

www.beyondpesticides.org

SECTION 20: APPENDIX

1. Notification sign template for toxic pesticide applications
2. IPM Record Keeping form



INSERT NOTIFICATION AND RECORD KEEPING FORM – 2 PAGES





MARBORG INDUSTRIES HEADQUARTERS

Exterior & Hardscape Management Plan

October 2010

SECTION 1: POLICY SCOPE

This site management plan applies to building exterior and onsite hardscape at MarBorg Industries Headquarters. The plan employs best management practices for maintenance and cleaning equipment, cleaning products and frequencies, and paints and sealants to limit the environmental impact of maintaining and cleaning the building exterior and hardscape.

SECTION 2: SITE DESCRIPTION

MarBorg Industries Headquarters building is 5,005 square feet and is located in the industrial area of Santa Barbara, California. The front of the building contains walkways and parking spaces and the rear of the building consists of walkways, sidewalks and parking spaces. Landscaping is minimal but does include some low shrubs, hedges and vines.

SECTION 3: POLICY GOALS

The goals of the Exterior and Hardscape Management Plan are:

7. Reduce the environmental impact of building exterior and hardscape maintenance activities by reducing chemical use and runoff, water use, energy waste and air pollution as compared to standard practice.
8. All machinery used at MarBorg Industries Headquarters will be battery-operated or plug-in equipment.
9. Protect the health of maintenance staff by reducing exposure to chemicals and gas-powered machinery.
10. Perform ongoing analysis of ways to improve the plan and operations relating to building exterior and hardscape maintenance.

SECTION 4: CONTRACTOR OBLIGATIONS

All vendors providing building exterior or hardscape maintenance services at MarBorg Industries Headquarters are responsible for adhering to this plan. Leyva Professional Landscape Services is the current contractor, and will abide by this plan at all times.

When MarBorg Industries Headquarters enters into a contract or extends the terms of an existing contract that includes building exterior or site maintenance, the contract shall require that the contractor comply with this plan. The contract documents shall also require the contracted company to maintain records in accordance with the plan and submit this information to the MarBorg Executive Director when requested.



SECTION 5: PERFORMANCE METRICS

To ensure ongoing compliance with the Exterior and Hardscape Management Plan, and to confirm that the desired sustainability outcomes are achieved continually over time, MarBorg Industries Headquarters will track the following performance metrics:

- MarBorg Industries Headquarters will compile a list of paints, sealants, and equipment purchases on a monthly basis. The contractor will provide the MarBorg Executive Director a written description of what materials are needed at MarBorg. MarBorg will verify the requested materials meet the plans requirements and purchase the items.
- MarBorg Industries Headquarters will provide monthly reports or work orders to measure performance and produce regular maintenance reports and present findings at regularly scheduled meetings with contractor.

SECTION 6: QUALITY ASSURANCE/QUALITY CONTROL

The following QA/QC measures will be taken to ensure the plan is being implemented successfully, to help ensure performance persists over time, and to confirm that performance metrics truly reflect actual outcomes:

- MarBorg Industries Headquarters will perform random inspections during exterior/hardscape maintenance activities.
- Schedule quarterly meetings with contractor (Leyva Landscape) and MarBorg Industries Headquarters maintenance staff on a bi-annual basis to discuss current best practices and address any issues or ways to improve overall appearance of the site. MarBorg will maintain a clean and safe exterior at all times.
- Leyva Professional Landscape Maintenance is responsible for maintaining and cleaning the hardscape and exterior property for MarBorg Industries Headquarters. The Executive Director at MarBorg Industries Headquarters will purchase all maintenance and cleaning equipment. Contractors and MarBorg staff will only use the equipment that is approved and provided by MarBorg's Executive Director.

SECTION 7: STANDARD OPERATING PROCEDURES

Maintenance Equipment

MarBorg Industries Headquarters equipment list used onsite consists of the following:

Type of Equipment:	Manufacturer	Compliance
Electric Blower	Stihl BJE61	No use of fossil fuels
Hula Hoe	n/a	Hand tool/no use of fossil fuels



Broom	n/a	Hand tool/no use of fossil fuels
Rake	n/a	Hand tool/no use of fossil fuels

Building Exterior Cleaning

The building exterior is pressure-washed (an electric pressure washer) with water 2 times per year. No chemicals are used to clean the building exterior. This reduced frequency of cleaning reduces resource consumption without jeopardizing appearance or cleanliness. Windows are cleaned by hand 1 time per month using a Green Seal GS-37 cleaner called Star Spray product. Only products that meeting the following criteria are used on windows, or if needed, the building exterior:

- General-purpose cleaner: Green Seal GS-37
- Glass cleaner: Green Seal GS-37
- Cleaning and degreasing compounds: Environmental Choice CCD-110
- Hard surface cleaner: Environmental Choice CCD-146

Building Exterior Paints and Sealants

All paints and sealants used on building exterior must meet the following requirements:

- Adhesives and sealants: VOC content is less than required by the South Coast Air Quality Management District SCAQMD Rule #1168
- Sealants used as fillers: meet or exceed the Bay Area Air Quality Management District Regulation 8, Rule 51
- Paints and coatings: do not exceed the VOC emissions and chemical component limits of Green Seal’s Standard GS-11 requirements

Sidewalk, Pavement and Other Hardscape Cleaning

All hardscape is cleaned 1-2 times per month by broom without jeopardizing safety or appearance. Parking lots are cleaned with electric blower, rake, and broom 2 times per month. No gas-powered blowers are used on site to protect local air quality. No chemicals shall be used to clean hardscape.

Snow and Ice Removal

No snow and ice removal activities are performed at MarBorg Industries Headquarters because current climate conditions never reflect snow and ice.

SECTION 8: RESPONSIBLE PARTIES

The following parties are responsible for plan development and oversight of implementation:

- The MarBorg Executive Director is responsible for overseeing the implementation of the plan and ensuring contractor compliance. The MarBorg Executive Director shall also be responsible for



providing applicable documents and websites to help personnel implement the required sustainability elements in the field.

- The MarBorg Executive Director is responsible for supervising record keeping and performance measurement. The MarBorg Executive Director is also responsible for how actual outcomes and sustainability performance for each element of the plan are measured and tracked over time.
- The MarBorg Executive Director is responsible for quality assurance/quality control processes. The MarBorg Executive Director shall verify that the plan is being implemented consistently and correctly, that performance persists over time, and that performance measurement methods truly reflect actual outcomes.

SECTION 9: RESOURCES

Green Gardener Program (topics of resource efficient and pollution prevention maintenance)

http://www.greengardener.org/how_it_works.htm

Santa Barbara Botanical Gardens

<http://www.sbbg.org/>

EPA Beneficial Landscaping

<http://www.epa.gov/greenkit/landscap.htm>



MARBORG INDUSTRIES HEADQUARTERS

Integrated Pest Management (IPM), Erosion Control, and Landscape Management Plan October 2010

SECTION 1: SCOPE

This plan provides guidelines for protecting and enhancing the natural diversity of the MarBorg Industries Headquarters site, while also supporting high-performance building operations and developing synergies between the building and its environmental context. The project is located at 728 E. Yanonali Street #A, Santa Barbara, CA. The Integrated Pest Management (IPM), Erosion Control, and Landscape Management Plan covers the entire building and associated grounds.

SECTION 2: GOALS

Goals include:

- Minimize the impact of site management practices on the local ecosystem
- Reduce exposure of occupants, staff, and maintenance personnel to potentially hazardous chemical, biological, and particle contaminants
- Prevent air pollution from dust and particulate matter
- Identify and remedy causes of erosion and restore eroded areas
- Protect local water bodies by preventing erosion and sedimentation from both ongoing landscaping operations and construction activities

The Plan addresses environmental best practices for:

- Outdoor IPM (See IPM Plan)
- Erosion and sedimentation control
- Landscape waste
- Fertilizer use

SECTION 3: RESPONSIBLE PARTIES

Kathy Borgatello Koeper, the Executive Director with support from Manuel Gomez, Building Maintenance Coordinator, is responsible for developing and managing the implementation of the IPM, Erosion Control, and Landscape Management Plan. Contracts with pest and landscape management vendors and construction contractors shall include extensive language describing their role in implementing the building's plan. Contractors involved with various elements of the plan shall carry out their tasks according to their contracts and report all relevant activities to the aforementioned parties. On occasion, several contractors may be



engaged simultaneously in various elements of the plan. To ensure an effective and coordinated effort, the building staff responsible for overseeing the plan shall review all proposed activities before implementation.

IPM, erosion and sedimentation, and landscape management strategies for the entire property include actions performed by the following contractors:

Function	Company Name	Primary Contact	Phone
Pest Control	Santa Barbara Pest Control	Bruce Craig	805.563.8888
Landscape Maintenance	Leyva Professional Landscaping Maintenance	Frank Leyva	805.3314856
Building Maintenance	MarBorg Industries	Kathy Koeper	805.963.1852

SECTION 4: QUALITY ASSURANCE CONTROL PROCESS

The party(s) responsible shall periodically evaluate the success of the plan. This evaluation may include producing and providing a report on an annual basis to senior management. Whenever possible, the annual reports shall include an evaluation of the performance, safety, cost, and environmental/public health benefits achieved as a result of its implementation.

Prior to implementation, service providers involved in the building’s plan shall submit all information about proposed practices to the responsible parties listed in Section 3, either through detailed contractual language or addenda that establish protocols and products that will be used onsite. Upon reviewing proposed activities, the responsible parties shall determine compliance with the plan and approve or deny action.

The responsible parties listed in Section 3 shall regularly communicate with all service providers and conduct regular site inspections and evaluations to ensure that the plan is in place and functioning as intended. In addition to ongoing quality control measures, the responsible parties will review all practices and products prior to contract renewal (typically annually) to identify opportunities for improvement and expansion of environmentally friendly practices.

SECTION 5: IPM STRATEGIES AND PRACTICES

Please see the separate IPM plan for details regarding IPM-related best management practices, least-toxic pesticides, emergency conditions, universal notification, recordkeeping, and sanitation.

SECTION 6: EROSION AND SEDIMENTATION CONTROL

MarBorg Industries Headquarters goal is to protect water and air quality through prevention of soil erosion and sedimentation. Meeting erosion and sedimentation (E&S) objectives includes the establishment of E&S



control plans during any infrastructure repairs or other construction activities that result in ground disturbance, as well as ongoing maintenance of the facility's site to prevent soil erosion and sediment transfer.

PERFORMANCE METRIC

This plan shall govern all components of E&S control at the project building and site. The practices identified in this plan shall be wholly adopted and used in 100% of the construction and routine site maintenance/operations scenarios at MarBorg Industries Headquarters.

PRACTICES TO OPTIMIZE EROSION AND SEDIMENTATION CONTROL

During Construction Activities

The prevention and control of E&S during construction is based on the Site Erosion and Sedimentation Control component of the construction specifications. This requires a plan with work methods and devices in compliance with the 2003 EPA Construction General Permit <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm> or another local jurisdiction, if more stringent. The specification shall be included in construction documents for all projects involving site work or grading.

During Routine Site Maintenance and Operations

The site has existing controls for erosion and sedimentation control and stormwater management consisting of:

- Very established landscape, no run-off occurs during rain storms
- Drainage at various locations on the site, drains cleaned regularly

When deteriorated conditions compromise the efficacy of the existing controls, the methods listed in the construction specification apply to the operations and maintenance work.

During significant weather events or due to seasonal detritus, soil and organic debris can build up in stormwater drainage systems; routine inspections and maintenance facilitate a fast response to erosion issues and limit the harmful environmental impacts of erosion and sedimentation. A regular inspection of existing controls shall be performed and logged to ensure that deficiencies are identified and remedied. This includes monthly (and weekly during El Nino years) inspection of the controls listed above, as well as the following:

- Assessment of slope stability after major rainfall events for site areas with steep slopes
- Inspection for standing water and drainage problems following major rainfall events
- Semi-annual inspection and cleaning of roof drains
- Inspection of storm sewers during major rainfall for evidence of sedimentation



SECTION 7: LANDSCAPE WASTE

MarBorg Industries Headquarters retains all landscape waste onsite, both to minimize the amount of waste sent to landfills and to create soil-enriching compost. Landscaping debris are taken directly across the street to the MarBorg recycling center to be placed in the mulch pile for reuse at any MarBorg location or pick-up and use by residents of Santa Barbara.

PERFORMANCE METRIC

This plan shall govern all components of landscape waste at the project building and site. The practices identified in this plan shall be wholly adopted and used in 100% of landscape management activities at MarBorg Industries Headquarters.

PRACTICES TO MINIMIZE/DIVERT LANDSCAPE WASTE

- Leyva Landscapes shall collect landscape waste, including, but not limited to, leaves, cut vines, and pruned branches for composting piles and shall use the compost to mulch existing plantings to reduce watering and fertilizing.
- MarBorg Staff will pick up green waste immediately and take across the street to green waste recycling area.
- MarBorg will recycle green waste and use the mulch on site and provides free mulch to the community.

SECTION 8: FERTILIZER USE

Fertilizer use shall be kept to a minimum to prevent eutrophication of local ponds, streams and ocean. Only organic fertilizers shall be applied on the grounds. Leyva Landscapes shall assume responsibility for administering organic fertilizer on the building grounds.

PERFORMANCE METRIC

The practices listed below shall be implemented to the extent noted in the following table. Where less-than-complete adoption occurs, the performance metrics indicated will be used to gauge performance against the implementation target. The performance metrics and implementation targets for each element are listed in the following table.

Site Management Products/Materials	Performance Metric	Implementation Target
Organic Fertilizer	Percent of Applicable Chemicals	100%
Manual Weekly Weeding	n/a	Complete Adoption
Tree Wrapping	n/a	n/a



Soil and Ground Cover Testing	n/a	Complete Adoption
Native and Adaptive Plantings	Percent of Applicable Landscape Areas	94%
Organic Mulching	n/a	Complete Adoption

PRACTICES TO OPTIMIZE FERTILIZER USE

Organic Fertilizer – Turf

- Not applicable, there is no turf at MarBorg Industries Headquarters.

Organic Fertilizer – Planting Beds

- The soil and ground cover in shrub and ornamental tree beds shall be tested for available nutrients.
- The landscaping contractor shall apply “Nature Safe” 8-5-5 OMRI (Organic Materials Review Institute: www.omri.org) listed organic fertilizer to all shrubs and trees once in the spring or fall.
- Soil surfaces shall be treated with fish hydrolysate, a liquid organic fertilizer, and additional liquid organic compounds to promote tree health and vigor.
- Shrub and tree beds shall be treated with 80cy of “MarBorg produced mulch” when needed.

Plantings

Whenever practical, native or adaptive plant species that are well-suited for the local climate and require minimal irrigation, fertilization, and maintenance, shall be integrated into the site landscape when new plantings are installed or reseeding occurs. The table below identifies site appropriate native/adaptive species approved for installation onsite during re-landscaping projects.

Botanical Name	Common Name
Prunus Lyonii	Catalina Cherry
Eriogonum Fasciculatum	California Buckwheat
Clematis lasiantha	No common name

Resources for Location Climate Appropriate Plant Species

- Lady Bird Johnson Wildflower Center Native Plant Database: <http://www.wildflower.org/plants/>
- Plant Native: <http://www.plantnative.org>
- Santa Barbara Botanic Gardens: <http://www.sbbg.org/>



MARBORG INDUSTRIES HEADQUARTERS
Indoor Air Quality Management Guide: Facility Alterations & Additions
October 2010

INTRODUCTION

The intent of this management plan is to prevent indoor air quality problems resulting from the construction/renovation process in order to help sustain the comfort and well-being of construction workers and building occupants. This plan will meet or exceed the recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association SMACNA IAQ Guideline for Occupied Buildings Under Construction, 1995, Chapter 3. All Subcontractors shall comply with the following job site IAQ management recommendations. Superintendents and/or foremen will provide training to their employees to ensure that construction IAQ management procedures are followed.

SECTION 1 – HVAC EQUIPMENT PROTECTION

The materials delivered to the site will be stored in an area away from the general construction. It will be stored on pallets up from the ground and shrink wrapped to prevent dirt and dust particles from attaching to the materials. Once the pallet is opened, the Subcontractor will cover each opening of exposed duct-work to prevent dust particles from infiltrating the actual supply and/or returns.

The HVAC equipment will be protected from collecting dust and odors to the best of our ability. The HVAC Subcontractor will cover each end of duct work with either a sheet metal cap of a at least 24 gauge metal or will receive 100% coverage of duct tape over each opening to avoid dirt and dust collecting within each section of fun. This will be done for both supply and return ducts. During the installation, the cover of the duct runs will be opened to connect to the line runs, but the openings will be recovered each day to prevent dust collection. Photo documentation will be provided for compliance.

Prior to the commencement of the duct runs within the building, the interior of the building will be swept clean utilizing clean sweep materials that are low emitting products and keep dust particles from becoming air borne. Only after this is completed will the HVAC installation commence.

The HVAC system will not be operational during construction. It will only be turned on when the complete electrical and HVAC system has been completed and accepted by the Owner. Upon final sign-off and release of permanent power, the General Contractor will commence start-up of the system.

Upon start-up of the system, the HVAC system will have all filters installed. These filters will be changed after start-up and prior to turn-over of the system to the Owner to be sure that the system is operating at full filter efficiency.



SECTION 2 – SOURCE CONTROL

All interior materials stored on-site will be protected from sun exposure and moisture as follows:

- Covered with either a visqueen and/or shrink wrapped for both protection from sun and moisture.
- Depending on the time of year construction the following two methods would be implemented if necessary.
 - Fans if ventilation and air circulation are necessary during warm weather periods.
 - Humidifiers if necessary to dissipate excessive humidity.
 - Heaters if necessary during cold, wet weather periods.
- No adhesive, sealant, caulking, primer, paint, or other wet product substitution will be allowed unless authorized by General Contractor. All products used must comply with the volatile organic compound (VOC) requirements of SCAQMD.
- Access to the building and job site interior shall be limited to construction workers to reduce the potential for contaminants to enter the building.
- Walk-off mats will be located at major entrances into the building interior and job site, service areas and the loading dock area.
- Photo documentation will be provided when/if necessary to demonstrate implementation of source control measures.
- Negative air pressure machines shall be provided:
 - Model number:
 - Filtration:

SECTION 3 – SCHEDULING/COORDINATION

Construction sequencing will be planned in advance to meet the owners schedule while implementing the following:

- Manufacturer’s recommendations for the application of interior finishes will be strictly adhered to during the course of construction. No materials will be installed over wet or uncured substrates.
- Carpeting and furnishings shall not be installed until after interior finishes have fully cured.
- Photo documentation will be provided to demonstrate compliance with scheduling/coordination measures.

SECTION 4 – HOUSEKEEPING

The jobsite shall be maintained in a neat and orderly manner and all trades will implement the following:

- All vapors and gases in the Building created as a result of construction will be effectively exhausted using 100% outside air.
- A sweeping compound will be used during clean-up to suppress the dust.



- Construction activities will include at a minimum weekly clean-up. If construction activities warrant daily clean-up, it will be done to keep dust and fumes under control.
- Dust collection systems will be used on cut-off saws, drywall sanders, and other similar tools. Collection bags will be emptied into receptacles located outside of the building.
- All water will be vacuumed out of the building immediately to keep the workspaces as dry as possible.
- No smoking is permitted inside the buildings or within 25 feet of the building.
- No use of interior restrooms – all construction trades will utilize portable toilets provided by General Contractor.
- All subcontractors utilizing fuels and/or solvent will not be allowed to store these materials within the Building. These materials will be stored in an exterior-located container that is cleaned, maintained and locked by the appropriate Subcontractor.
- Photo documentation will be provided to verify that good housekeeping measures have been maintained.

SECTION 5 – PATHWAY INTERRUPTION

The following methods will be used to prevent contamination:

- Contain all construction areas with plastic barriers.
- Provide path of travel to and from construction work areas for construction workers.
- Provide air scrubbers in construction work areas to control any dust and odors that may occur while using VOC-emitting materials.

SECTION 6 – SAFETY

- Weekly safety meetings will be conducted by each subcontractor, a weekly sign in sheet will be required from each subcontractor.
- All construction safety rules and procedures will be enforced.
- All construction areas will be designated with signs and caution tape.
- All construction workers will use the service elevator only.
- All common areas in and around construction work areas will be posted with signs that identify construction areas only and non-construction areas.
- Pathways will be provided for the public and city employees away from any construction areas.

SECTION 7 – SMOKING POLICY

No smoking is allowed in the building at any time during or after construction, in accordance with MarBorg's No Smoking Policy.



SECTION 8 – MOISTURE CONTROL

- All absorptive building materials (including but not limited to carpet, drywall, ceiling tiles, and furnishings) shall be stored in a dry location and kept dry at all times.
- Moisture-damaged materials will not be used. Any porous or absorptive building materials that have been exposed to moisture should be thoroughly dried before being installed. Any porous material that has remained wet longer than 48 hours, or shows any sign of mold shall be discarded and replaced.
- If it begins to rain or groundwater is coming into the building, construction workers will notify the superintendent immediately and relocate, cover, or protect all absorptive materials.

SECTION 9 – FILTRATION

- If permanently installed air handlers are used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 shall be used at each return air grille.
- All filtration media will be replaced immediately prior to occupancy per project specifications.

SECTION 10 – HVAC AND LIGHTING SYSTEMS

- HVAC and lighting systems shall be returned to the designed or modified sequence of operations.

SECTION 11 – IAQ ASSURANCE POST-CONSTRUCTION

General Contractor will comply with the Contract Documents and coordinate the IAQ Management Plan with the Commissioning Authority.

Performing IAQ assurance procedures is necessary to verify that pollutant concentrations are at acceptable levels after construction activities have ended and before occupant move-in. Develop and implement an Indoor Air Quality (IAQ) Management Plan for the preoccupancy phases using a flush-out procedure as follows:

Flush-out Procedure

- After construction ends and with all interior finishes installed, install new filtration media and flush-out the building by supplying a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of at least 60°F and, where mechanical cooling is operated, relative humidity (RH) no higher than 60%.
- The space may only be occupied following delivery of a minimum of 3,500 cu.ft. of outdoor air sq. ft. of floor area to the space, and provided the space is ventilated at minimum rate of 0.30 cfm/sq.ft. of outside air or the design minimum outside air rate, whichever is greater, a minimum of three hours prior to occupancy and during occupancy, until the total of 14,000 cu.ft./sq.ft. of outside air has been delivered to the space.



Building Flush-Out Schedule

The preliminary building flush-out schedule for this project shall be as shown below in Table D. Punch-list items and furniture set-up and installation will occur during this period, but all building finishes (including all interior paints and adhesives) will have been completed prior to the start of the flush-out period.

Table D.

Date	100% Outside Air Flush-out Period	Hours
Friday, <month/day/year>	6:00 pm to 11:59 pm	6
	TOTAL HOURS	xxx

If weather conditions during the flush-out period do not allow for thermal comfort to be maintained in occupied zones, the system should be returned to normal operation during the occupied periods and additional flush-out periods shall be scheduled for the week of _____.



APPENDIX – CHECKLIST OF SMACNA GUIDELINES

GENERAL NOTES	
1	Read each item below and incorporate into construction strategies
2	Place a check mark on each item as it is completed during construction
3	Photo document each checked item
HVAC PROTECTION	
1	Seal all return system openings with plastic
2	Clear the mechanical room of any stored construction or waste materials
3	Repair duct and air handler leaks immediately
4	Place ceiling tiles before removing protective plastic from HVAC returns
5	Seal diffusers with plastic
6	Seal window units with plastic
7	Inspect and clean all ducts and diffusers before HVAC start-up
8	Change filters before occupancy
SOURCE CONTROL	
1	Use portable fans to ventilate areas during carpet installation
2	Prohibit vehicles from idling near any project openings
3	Use bottled gas and electric-powered equipment, rather than gas-powered
4	Use a portable fan to vent dust, odors, and dirt to the outdoors
5	Use an enclosed tanker rather than an open kettle for roofing
6	Keep all containers of wet products covered as much as possible (paint, adhesives, etc)
7	Cover and seal waste materials that release odors
8	Seal any surfaces with persistent odors
PATHWAY INTERRUPTION	
1	Do not exhaust dust, odors or dirt where it can be drawn back into the building
2	Erect a dust curtain to keep dust from migrating to the surrounding occupied buildings
3	Relocate equipment and staging areas out of site air flow
4	Locate roofing tar kettles away from air intakes
5	Seal building openings from outside dust, odors and dirt
HOUSEKEEPING	
1	Daily use wetting agent or sweeping compounds to keep site dust controlled
2	Clean away dust regularly
3	Use damp rag, wet mop or high efficiency vacuum on high dust area
4	Immediately clean and remove excess solvent-containing products
5	Choose low-odor cleaning agents and ventilate area
6	Remove accumulated water, keep all work areas dry
7	Daily vacuum settled dust with a HEPA filtered vacuum
8	Protect all insulation from moisture



9	Protect all ceiling tiles from moisture
10	Protect all carpeting, carpet tiles from moisture
11	Protect all other porous finish materials from moisture
SCHEDULING	
1	Install carpet after paint emissions have been ventilated
2	Ventilate continuously for at least 48 hours after dust or odor producing activities
3	Schedule HVAC start-up at least 48 hours after carpet installation
4	Schedule HVAC start-up at least 48 hours after dust-, or odor-producing installations