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# 2016

EESH YEAR-END REPORT





*Carol B. Cala*

**Carol B. Cala,**

*Vice President, Corporate Energy,  
Environment, Safety and Health*

In 2016, Lockheed Martin's Energy, Environment, Safety and Health organization continued to build upon its strong compliance foundation and environmental stewardship initiatives while delivering business value and contributing towards enterprise growth. In this Year End Report, you will find a summary of EESH's contributions in 2016 that demonstrate the adaptability of our programs to changing landscapes and the robust quality of our management system in light of unique challenges and opportunities – such as a major acquisition and divestiture.

As Lockheed Martin navigates through an increasingly complex global society, it is imperative that we anticipate and manage potential risks from the impacts of climate change, regulation, shifts in technology and changing consumer expectations.

Managing these risks present opportunities for proactive stewardship, engagement with stakeholders and increased business value that ultimately contribute towards human health and the environment.

Corporate EESH's function is to deliver value to our business areas by:

- Promoting environmental stewardship through reductions in carbon, energy, water and waste while increasing renewable energy consumption
- Implementing safety programs and initiatives for a safer and healthier workforce
- Driving ESH considerations throughout our business lifecycle and exploring opportunities for product stewardship
- Building upon our strong compliance foundation
- Maintaining a robust ESH management system
- Engaging with communities and stakeholders
- Growing our talent

EESH's various functions enable us to deliver measurable competitive advantage to Lockheed Martin, anticipate risks to ensure business sustainability, leverage opportunities for future growth and achieve leadership in our industry for environmental stewardship.

We invite you to share in our successes this year and thank our stakeholders as our achievements are a reflection of cross-collaborative efforts across the Corporation.

# STRATEGIC FOCUS AREAS

## Remediation

In 2016, we successfully integrated legacy Sikorsky and MFC environmental remediation projects into the portfolio managed by Corporate EESH.

## Target Zero

Enhance Lockheed Martin's capabilities to ensure a safer and healthier workforce. In 2016, we refined our Target Zero Structured Improvement Activities (SIAs) to create an ergonomically efficient culture, incorporate resiliency and expand the focus to other safety and health risk areas.

## Go Green

In 2016, Lockheed Martin reaffirmed the existing Go Green 2020 goals after reviewing the impact of the changes in the company from the inclusion of Sikorsky with a continued focus on waste generation, energy and water usage and greenhouse gas emissions.

## Business Growth & Globalization Alignment

Drive ESH considerations throughout our business life-cycle while ensuring alignment and supporting Lockheed Martin's global operations and programs. In 2016, our Australia operations achieved certifications to ISO14001, OHSAS 18001 and AS/NZS 4801.

## VALUE

## Talent Management

In 2016, seven EESH professionals earned their Green Belts (three) and Black Belts (four), for a total of 24 trained/certified Belts throughout all EESH departments. Green/Black Belts facilitated 46 Structured Improvement Activities (SIA) in 2016.

## Governance

Shape and define the common elements by which the Lockheed Martin ESH Management System is established, operated and controlled. In 2016, we launched consistent, enterprise-wide ESH training programs for all levels of Lockheed Martin's leaders.

# ESH AWARDS AND HIGHLIGHTS

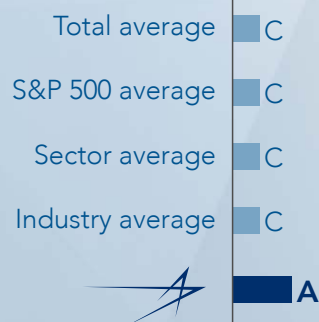


## ACHIEVED AN

**A** (HIGHEST ACHIEVABLE SCORE)

Only 9% of companies responding to CDP also achieved an A.

### Average CDP Scores:



Dow Jones Sustainability Indexes

For the third year in a row, the Dow Jones Sustainability World Index (DJSI) has recognized Lockheed Martin as

**BEST-IN-CLASS**

in the area of corporate sustainability. This distinction is given to the top 10% of the largest 2,500 companies in the S&P Global Broad Market Index based on long-term environmental, social and economic benchmarks. Lockheed Martin is the

**ONLY**

North American prime defense contractor included on the World Index.



CLIMATE LEADERSHIP AWARDS 2016

Lockheed Martin received EPA's Climate Leadership Award in the category of Organizational Leadership, which recognizes

**EXEMPLARY LEADERSHIP**

in our internal response to climate change and the engagement of our peers, partners and supply chain. The award also acknowledges:

- Transparency of our GHG disclosures
- Operational practices that decrease climate impact through our Go Green program
- Products and services that help customers decrease GHG emissions
- Overall corporate strategy and commitment



**RANKED #22**

(AS OF NOVEMBER 2016) on U.S. EPA's National Top 100 Green Power Partnership which represents the largest green power users within the Green Power Partnership.



**RANKED #8**

in Corporate Responsibility Magazine's 100 Best Corporate Citizens for 2016. Lockheed Martin was the highest ranked company in the aerospace and defense sector. Companies were ranked in seven categories:

- Environment
- Climate change
- Human rights
- Employee relationship
- Corporate governance
- Philanthropy
- Financial performance



**RANKED #47**

in 2016 Newsweek's Green Rankings of U.S. 500 publicly traded companies and #88 in its Global 500 list. 500 of the largest publicly traded global companies and U.S. companies were ranked in eight categories:

- Energy productivity
- GHG productivity
- Water productivity
- Waste productivity
- Green revenue
- Sustainability pay link
- Sustainability board committee
- Audited environmental metrics





# ENERGY & ENVIRONMENTAL STEWARDSHIP

HIGHLIGHTS AND AWARDS

ENVIRONMENTAL STEWARDSHIP

ENERGY STEWARDSHIP

WATER STEWARDSHIP

WASTE STEWARDSHIP

ADVOCACY AND GOVERNANCE

SAFETY AND HEALTH

REMEDIATION

# ENVIRONMENTAL STEWARDSHIP

GOALS

PERFORMANCE

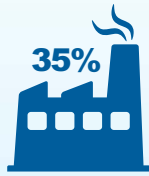
## OUR 2020 GO GREEN GOALS

REDUCE  
**WATER**  
USE BY



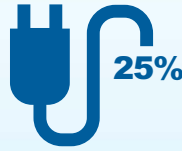
24%

REDUCE  
**CARBON**  
**EMISSIONS**  
BY



29%

REDUCE  
**FACILITY**  
**ENERGY**  
USE BY



21%

REDUCE  
**TOTAL**  
**WASTE**  
BY



14%

ANNUAL ENERGY AND  
WATER **COST AVOIDANCE** OF

**\$26M**

COMPARED TO **2010**

## OUR 2016 YEAR END PERFORMANCE

*Reductions measured from a 2010 baseline. Waste reductions measured from a 2014 baseline.*

## Solar Farm

Lockheed Martin Aeronautics, Skunk Works in Palmdale, CA celebrates its fully operational seven acre solar farm.

**THIS 1 MW SOLAR FARM WILL REDUCE OUR UTILITY PROVIDED ELECTRICAL USE BY 10%.**



The Palmdale solar farm is the largest, single axis photovoltaic system built at an industrial facility in Southern California. The solar farm was constructed in only three months and features a tracking system that allows the 3,306 panels to move east to west following the sun for maximum power collection.

# ENERGY STEWARDSHIP

Lockheed Martin has made a pledge to quadruple its on-site renewable generation to

**10  
MW**

by the end of 2020 through the EPA Green Power Partnership On-Site commitment. We currently have over 5 MW capacity of on-site renewable generation and are on track to meet this commitment.

From our 2013 baseline year to 2016, Lockheed Martin

**MORE THAN  
DOUBLED**

our **GREEN FOOTPRINT** through Energy Star®, LEED and BREEAM certification.

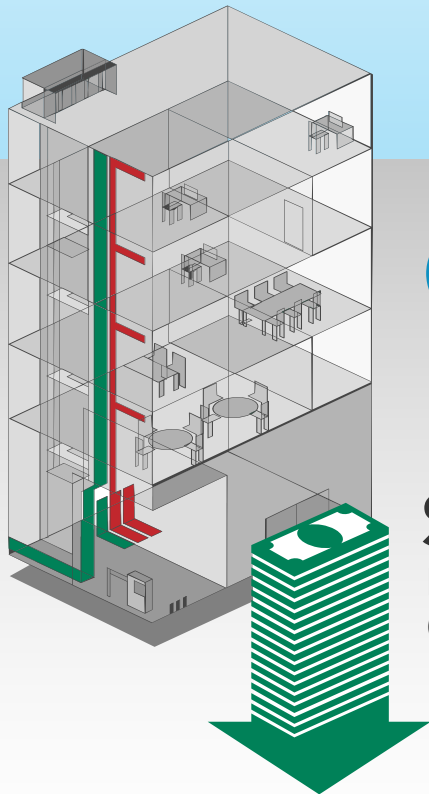


Our facilities also completed more than 60 energy-efficiency and carbon reduction projects including: HVAC, lighting, building control systems, building envelope, renewable energy projects and retrocommissioning.



Over 15 HVAC-related projects were completed in 2016, resulting in approximately 11 million kWh of annual energy usage reduction and over

**\$1 MILLION  
IN RECURRING ANNUAL  
COST AVOIDANCE.**

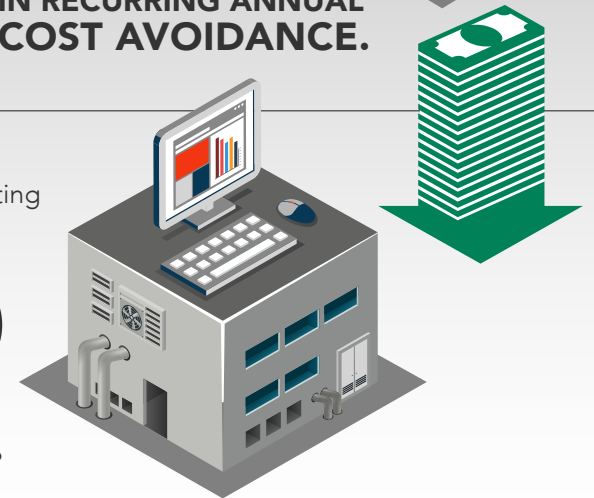
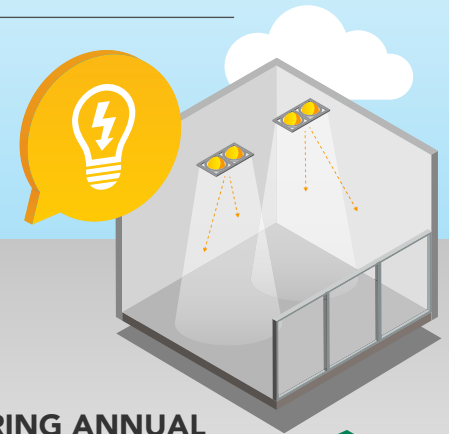


Over 20 lighting projects were also completed, which resulted in approximately 5.5 million kWh in annual energy usage reduction and over

**\$500,000 IN RECURRING ANNUAL  
COST AVOIDANCE.**

Over 10 building management system projects were completed in 2016, resulting in over 5 million kWh of annual energy usage reduction and approximately

**\$400,000  
IN RECURRING ANNUAL  
COST AVOIDANCE.**

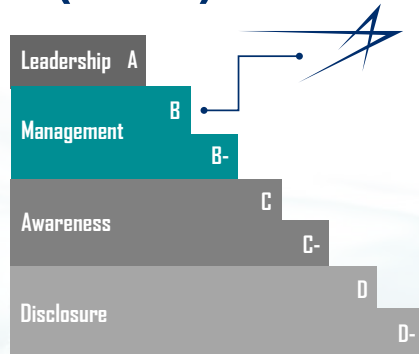


# WATER STEWARDSHIP

CDP 2016  
Water Score:



Scores Run From  
A (Highest) To  
D- (Lowest)



Sector Benchmark

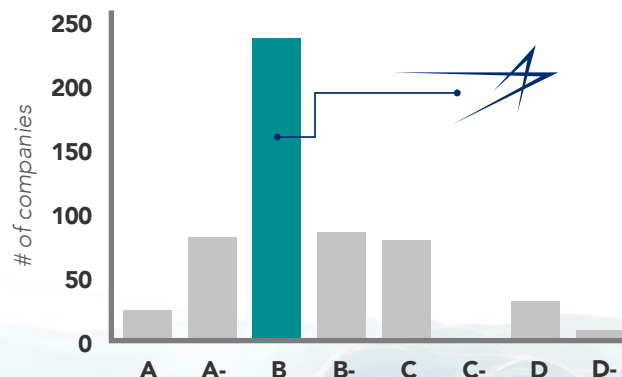


Chart shows count of scores achieved by peers in the Industrials sector.

CDP Progress  
Statement

**“A GOOD RESULT.”**

Lockheed Martin is measuring its impacts to try and reduce them, has implemented a policy and strategic framework to take action, and has set targets on water issues.”

Sunnyvale Irrigation Smart Metering Project



**IRRIGATES BASED ON NEED**

Weather change, soil conditions and plant types



**REDUCES RUNOFF**

Automated cycle and soak



**DETECTS LEAKS**

Remote controlled, notifications and auto shutoff.

Sunnyvale Cooling Tower Removal

**B150 COOLING TOWER REMOVAL**

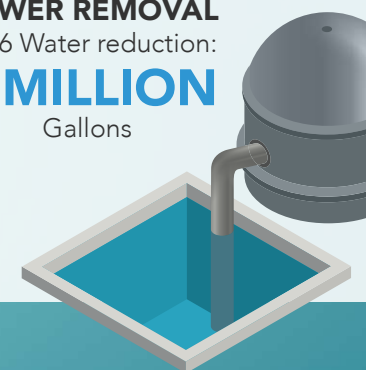
2016 Water reduction:

**1 MILLION**  
Gallons

**B152 COOLING TOWER REMOVAL**

2016 Water reduction:

**4 MILLION**  
Gallons





# WASTE STEWARDSHIP

## ESH Excellence Award Winner: Aeronautics Precious Metal Gold Reclamation

Gold containing gap filler waste from the F-35 program is now transported to a waste vendor for precious metal recovery.

LOCKHEED MARTIN RECEIVED



OF THE PROCEEDS FROM THE RECLAIMED  
GOLD FOR A TOTAL SETTLEMENT OF OVER

# \$500,000

This represents production from approximately 59 F-35 aircraft. In addition to financial benefits, this gold recovery program strengthens waste stewardship for Aeronautics as it reduces environmental impacts from offsetting primary metal production and mining, with broader impacts to resource use, human health, ecosystem quality and climate change.



## 2016 Employee e-Waste Events

This year, Corporate EESH sponsored 6 Employee e-Waste Events, where employees sustainably recycled personal electronics (e.g., computers, cell phones, circuit boards), which did not include Lockheed Martin-owned assets. The 2016 Employee e-Waste Events included participating sites in Owego, Syracuse, Marietta, Stratford, Moorestown and Orlando. Approximately 600 employees recycled over 45,000 pounds of e-Waste.

## Business Excellence in Recycling

Lockheed Martin's Corporate Headquarters Facility Team members were recognized by Montgomery County Government during their 17th Annual Achievement Recognition Ceremony for Business Excellence in Recycling. This award recognizes businesses and organizations that recycle 70% or more of their waste stream in 2015. Lockheed Martin's Corporate Headquarters is one of five companies to receive this high level award in Business Excellence. The Corporate HQ Facility Team has managed to overcome many restrictions related to storage, time, labor and staging availability in order to maintain high recycling performance.



DEPARTMENT OF  
**ENVIRONMENTAL  
PROTECTION**  
MONTGOMERY COUNTY • MARYLAND

HIGHLIGHTS AND AWARDS

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ADVOCACY AND GOVERNANCE

SAFETY AND HEALTH

REMEDIATION



# ADVOCACY AND GOVERNANCE

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# ADVOCACY AND GOVERNANCE

## Environment, Safety & Health Management System



### Leadership Commitment

Rolled out a new enterprise-wide ESH training program for all levels of Lockheed Martin leaders. The program addresses ESH risks presented in our business, programs to address these risks, and tools to help leaders manage and engage our employees in the success of our ESH programs.

### Strengthening our Management System

Made available our ESH policy to external parties, demonstrating our corporate commitment to ESH excellence. Lockheed Martin Australia operations achieved certification to Standards AS/ NZS 4801, ISO 14001:2004, and OHSAS 18001:2017. This 3rd party validated certification covers 100% of Australian sites and operations, verifying the strength of our ESH programs for our customers.

### Compliance Assurance and Business Value

Support of enterprise ESH training programs resulted in a \$48K annual savings for the Corporation, providing both technical and organizational development opportunities across the enterprise-wide ESH function.

# ADVOCACY AND GOVERNANCE



## Sikorsky Integration

Outlined and executed key steps to assimilate Sikorsky operations into Lockheed Martin's ESH Management System, processes and tools. Supported critical environmental permit evaluations and transitions to eliminate any disruptions to production operations during year one.

## IS&GS Transition

Supported the divestiture of the IS&GS business by implementing controls to mitigate residual risks for the Corporation.

## Subject Matter Expert (SME) Support Programs

Launched new subject matter expert (SME) mentoring program in 2016. Projects paired experts with those less experienced to impart specific program knowledge, advisement in regulatory requirements and to coach and provide confidence in program execution. Program grows our talent base and spreads diverse ideas by allowing for knowledge and experience sharing.



## CHEMICAL SUSTAINABILITY

CEESH continues to collaborate with our CETO, GSCO and business area partners in order to address challenges related to increasing global chemical and material restrictions.



CRX-202: Restrictions on the Use of Chemical Substances in Products and Processes was published. This cross-functional procedure defines roles and responsibilities related to restricted substances risk management and references the chemical substances targeted for reduction based on regulatory and/or supply risks.



We closely monitor chemical regulations and restrictions that could impact our operations and communicate potential impacts to the Restricted Substances Community of Practice.



Continued partnering with the International Aerospace Environmental Group and the IPC organization to develop a chemical substance reporting standard for A&D suppliers to more fully assess and mitigate risk in the supply chain related to the use of hazardous materials.





# SAFETY<sup>AND</sup> HEALTH

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# SAFETY AND HEALTH

Lockheed Martin's Target Zero initiative motivates employees to embrace a "zero accidents" mentality. To drive improvement, we emphasize leadership ownership, and employee engagement, driven through a variety of safety programs and initiatives. Target Zero has led to significant improvements in safety performance since its introduction in 2004.

RECORDABLE  
INCIDENT  
(GOAL 1.23)



RATE

1.11

DAY  
AWAY  
CASE  
(GOAL 0.22)



RATE

0.20

SEVERITY  
(GOAL 6.14)



RATE

5.12

## Lockheed Martin Ergo Cup IV

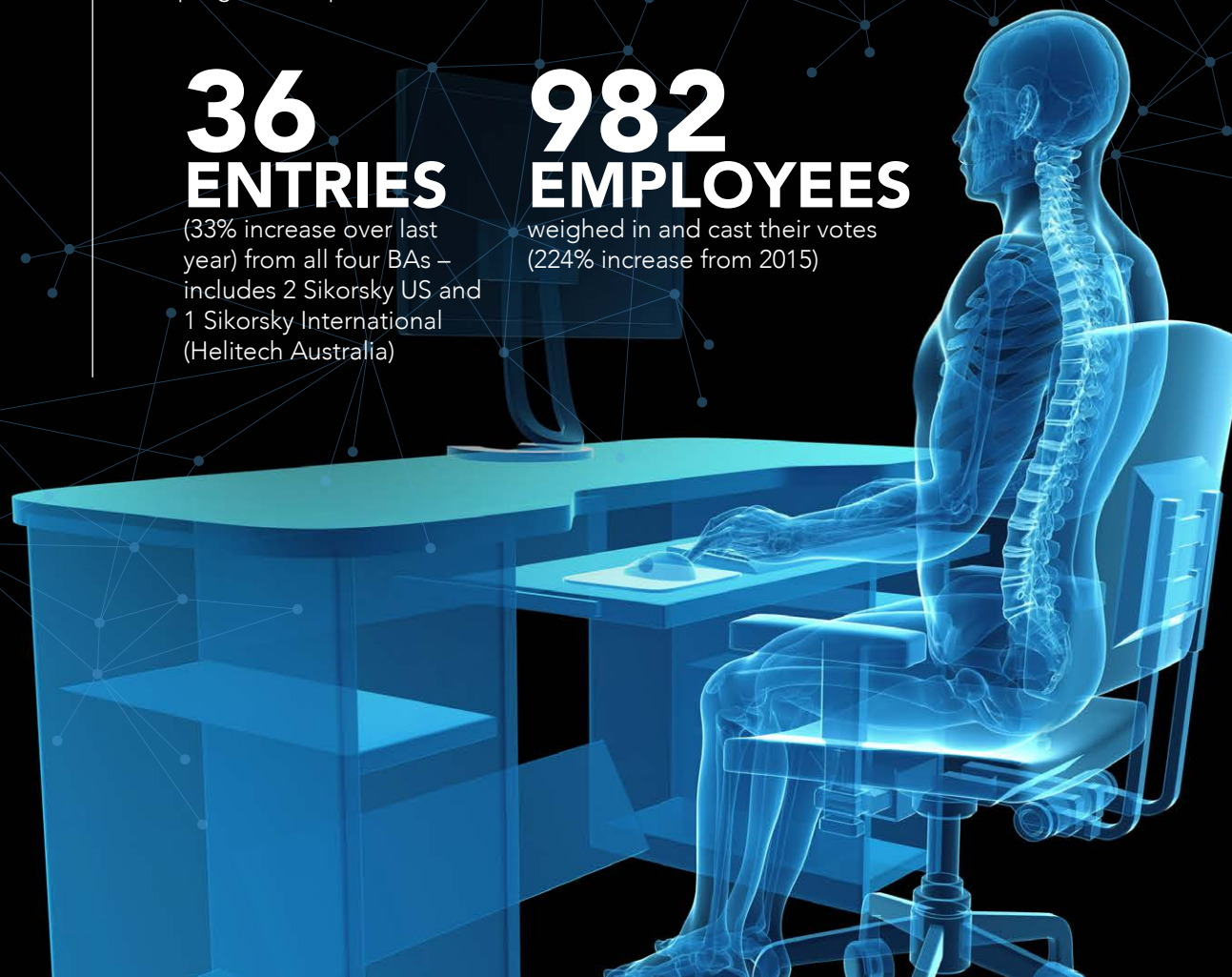
Continued to enrich employee participation and engagement in Lockheed Martin's Ergo Cup Competition. This year we had the highest number of ergonomic innovations submitted since program inception.

**36  
ENTRIES**

(33% increase over last year) from all four BAs – includes 2 Sikorsky US and 1 Sikorsky International (Helitech Australia)

**982  
EMPLOYEES**

weighed in and cast their votes (224% increase from 2015)





# SAFETY AND HEALTH

## 19th Annual Applied Ergonomics Conference

Lockheed Martin presented at four conference sessions focusing on topics such as: strengthening our safety culture; ergonomics enhancing affordability; employee engaged ergonomics and vibration reduction controls.



**MFC Connect  
Clock and Lock**  
MFC Grand Prairie



**TB-37 Array Reeling  
Ergonomic Improvement**  
RMS Syracuse



**U2 Wing Dolly**  
Aero Palmdale

## Safety Month Campaign

*"Safe for Life"*

*(Safe at Work, Safe at Home)*



**5,289**  
employees  
accessed game



**350**  
sites and  
20 countries

## Target Zero SIAs

In 2016, we extended our signature Target Zero Structured Improvement Activities (SIA) offerings across global locations. In total, we conducted 7 events across all 4 BAs:



**72** specific operational areas utilizing 87 team members representing various functions, trades and responsibilities were evaluated



**415** unique risk reduction opportunities were identified – of those, 206 (50%) were implemented by completion of the event



Lockheed Martin Canada – Montreal Commercial Engine Solutions (CES) coordinated bi-lingual event and out-brief to site-wide audience



Lockheed Martin New Zealand – customer wants to extend the SIA process to other bases after SIA demonstrated Target Zero improvement results





# REMEDIATION

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# REMEDIATION

We participate in environmental cleanup activities at some of our present and former facilities, and at third-party sites, where we are potentially responsible for environmental conditions at those locations. With over a century of operational history, some acts conducted by Lockheed Martin and its legacy businesses over the years, although compliant with relevant laws at the time, resulted in soil or groundwater contamination.



## Effective Solutions

We work diligently with nearby communities and regulatory agencies to remedy these effects and apply learnings to existing and new facilities. We conduct quarterly reviews of our remediation sites to ensure effective cleanups that comply with today's laws. Where possible, we seek sustainable remediation solutions consistent with achieving efficient solutions and closure.



## Subject Matter Expertise

We have a talented group of project leaders offering a diverse skillset, which includes geology/hydrogeology, environmental engineering, asbestos abatement, vapor intrusion assessment and response, project management and other disciplines.



## Community and Stakeholder Engagement

We balance technical feasibility, cost efficiency and stakeholder interests in performing work under dynamic conditions. We are mindful of actual and potential concerns that may be held by affected communities, and affirmatively engage with communities, governmental authorities and other interested individuals regarding our plans, decisions and implemented actions.

 Former Rocket Motor and Ballistics Testing facility in Beaumont, California. Lockheed Martin maintains ownership of 565 acres as a conservation easement for completion of remediation activities.

