

# NINE WAYS TO ZERO

## 2017 ANNUAL SAFETY REPORT

Learn about our principles and the state-of-the-art safety techniques we applied on some of the world's most complex projects.





# OUR JOURNEY TO ZERO

This report highlights how we prioritize safety, health and the environment (SH&E) in everything we do — from design and construction to the financing, operation and management of projects all over the world. We are 87,000 experts in more than 150 countries dedicated to staying safe on and off the job, so that we can realize the potential of our projects, transform communities and improve people's lives.

## Fiscal Year 2017 (FY17)

- Launched a digital [Safety Playbook](#) to help project teams perform work safely anywhere in the world.
- Closed the year with our strongest safety results to date.
- Three projects received a perfect Project Safety Review (PSR) score for the first time in AECOM history.
- Received multiple Workplace Safety Awards from the National Safety Council in 2017 including 208 Occupational Excellence Achievement Awards, 91 Perfect Record Awards and a 15 Million Hours award.



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# WHO WE ARE

## SH&E Vision

To be the beacon of safety excellence in the industries and global communities in which we work.

## Mission

Safeguard our people, projects and reputation by striving for zero employee injuries and illnesses, avoiding property damage and operating and delivering our work responsibly and sustainably.

## Approach

To deliver on our mission, we foster a Culture of Caring by implementing our comprehensive Safety for Life program, guided by our Life-Preserving Principles.



# SAFETY FOR LIFE

Safety for Life is our comprehensive SH&E program. Guided by our Life-Preserving Principles, it provides the policies, procedures and processes needed to avoid incidents — whether work-related injuries or illnesses, property damage or environmental loss — and makes our operations sustainable.

To advance Safety for Life, we are committed to:

- Striving for zero work-related injuries and illnesses to AECOM employees and protecting the environment as a result of our activities.
- Providing a highly effective SH&E management system that is continually monitored to respond to changing internal and external factors.
- Advancing our sustainability goals to prevent pollution, conserve resources and make our operations sustainable.
- Making AECOM the provider of choice for the safe execution of design, build, finance, operate and maintenance work globally.

**Click for a video message from our CEO and Chief Safety Officer.**



## Why is Safety mission critical?

Watch Mike Burke, Chief Executive Officer, reflect on 2017 and how we got closer to our goal of zero work-related injuries.



## Safety and artificial intelligence?

Watch Andy Peters, Chief Safety Officer, share what “best-in-class safety” means at AECOM, highlights from 2017 and his thoughts on the next generation of safety.





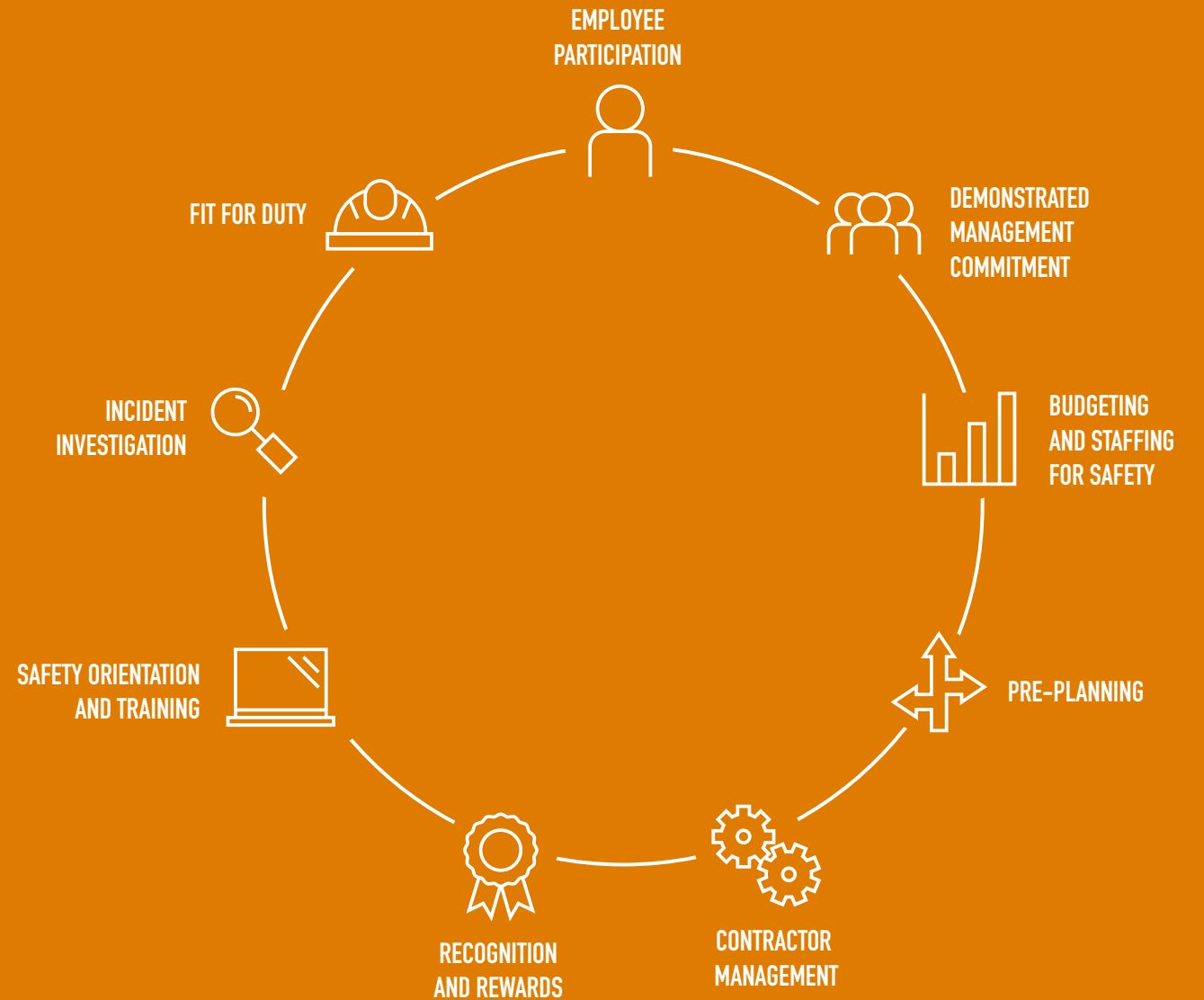
# WHAT WE BELIEVE

## Why are the Life-Preserving Principles (LPP) important?

Our principles help guide our Safety for Life program. Through the voices of our leaders, learn what these principles mean and how you can apply them to your own work.



[Click to watch a video](#)





# WHAT WE BELIEVE

Learn about the robust techniques, procedures, tools and online training systems we use to deliver each principle.

**“I’M A BIG BELIEVER THAT  
GOOD TEAMS NEED A  
PLAYBOOK. OUR NINE LIFE-  
PRESERVING PRINCIPLES  
AT AECOM FORM OUR  
SAFETY PLAYBOOK.”**

**Andy Peters**

Chief Safety Officer





## DEMONSTRATED MANAGEMENT COMMITMENT

Our executives, senior managers and project managers lead the SH&E improvement process by continuously demonstrating their commitment.

### Tools, Programs and Techniques

- Our leaders set targets for conducting monthly observations in the workplace and on work sites.
- The Construction Code of Conduct was launched to further demonstrate our commitment to safeguarding our people.

### FY17 Highlights

Our construction team in Abu Dhabi, United Arab Emirates, won the Innovation of the Year Award for their Life-Preserving Principles Campaign by explaining each principle through the voices of their leaders.



## EMPLOYEE PARTICIPATION

Our people are actively engaged in our safety processes through committees, training, audits, observations and inspections. They are encouraged to participate in health initiatives and adopt a healthy lifestyle.

### FY17 Highlights



The winner of our annual safety video competition was the "Delaware Memorial Bridge," which featured breathtaking footage of safety measures at a high bridge work site.



Our runner up, "Safe by Choice Not by Chance," speaks about the importance of keeping a balanced work-life.



The Design and Consulting Services Americas group held a Kids Calendar Contest to engage the youngest members of our AECOM family to help celebrate safety throughout the year.





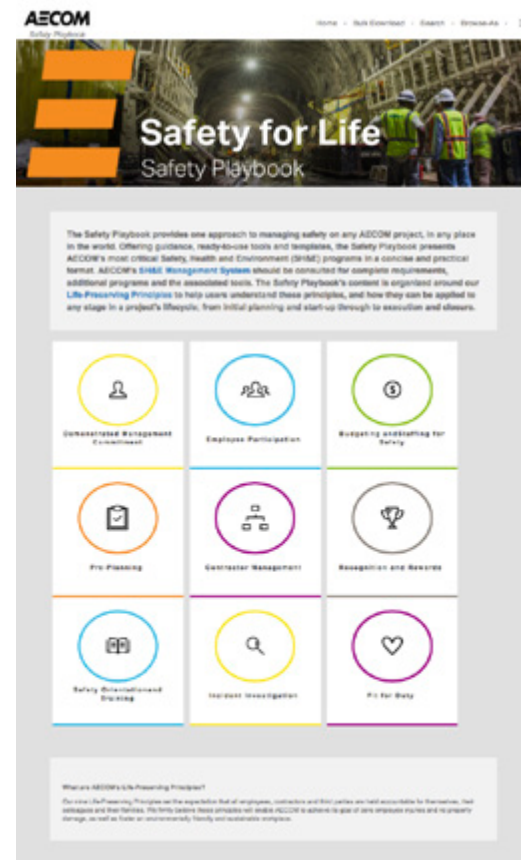
## PRE-PLANNING

We deploy effective risk mitigation efforts to design, plan and build safety into every project. Pre-project and pre-task planning is an effective tool in protecting our employees and the environment.

### FY17 Highlights

The digital, mobile-friendly [Safety Playbook](#) provides guidance and tools to help project managers and their teams perform work safely from anywhere in the world.

The content is organized around our principles to help users understand how they can be applied to any stage in a project's lifecycle; from initial planning and start-up through to execution and closure.



## SAFETY ORIENTATION AND TRAINING

We provide our people with effective safety training to identify and mitigate hazards in the workplace and prevent injuries to themselves and others.

### Tools, Programs and Techniques

- All employees receive an office orientation training and are assigned SH&E training from AECOM University, such as Safety for Life and the Global Safety Orientation.
- Employees are encouraged to develop a yearly Personal Safety Action Plan to help them identify potential hazards associated with key life activities and ways to address them.
- The “Speak Up! Listen Up!” training program is designed to help us become more skilled in and comfortable with having constructive conversations.

### FY17 Highlights

We added a well-being module to the global Safety for Life training to emphasize the important link between safety and overall well-being.





## BUDGETING AND STAFFING FOR SAFETY

Our people are competent, fully trained and qualified to provide technical resources to our internal and external clients. A budget to support safety activities is included in project proposals.

### FY17 Highlights

We have more supervisors and certified safety professionals than many of our industry competitors. From employees who are involved with safety professional organizations to our corporate partnerships that include the Campbell Institute at the National Safety Council in the United States, we are active partners in the safety industry and contribute to advancing industry best practices.



## CONTRACTOR MANAGEMENT

We work closely with our sub-consultants, sub-contractors, contractors and joint venture partners to provide a safe work environment for employees and the public. Our goal of SH&E performance excellence is equally shared by all project participants.

### Tools, Programs and Techniques

Our Certified Quality Management System, in addition to providing a preferred suppliers list, offers guidance on sub-contractor selection and management, contractual terms, performance auditing and in-house contractor training.







## RECOGNITION AND REWARDS

Our people are recognized for their efforts in working safely and supporting our safety efforts.

### Tools, Programs and Techniques

Our Safety Star recognition program, Making a Difference (MAD) Challenge Coins and other AECOM Recognition and Awards activities make it easy to recognize employees who inspire a safe and vigilant workplace.

### FY17 Highlights

- 254 Executive Challenge Coins presented (North America and Europe)
- 592 AECOM Safety Star awards (Global)
- 5,164 Scratch Cards awarded (Asia)
- 15 projects achieved a Project Safety Review (PSR) score of 85 percent or above



## INCIDENT INVESTIGATION

We investigate all recordable incidents and serious near-misses to identify contributing factors and root causes in order to prevent a reoccurrence. Lessons learned are identified, communicated and implemented.

### Tools, Programs and Techniques

When we act to make safety a priority with incident reports and observations, we reduce our injuries.

- IndustrySafe is used to report near-miss incidents, environment-related events and employee or non-employee injuries.
- LifeGuard is a simple and easy-to-use web portal to raise all observations on a project, including good observations and unsafe acts and conditions.

### FY17 Highlights

Our combined safety behavior results are:

- 5,471 Senior Management Observations
- 379,497 Observations







## FIT FOR DUTY

We are responsible for not posing a health and safety hazard to ourselves or others by reporting to work fit for duty.

### Tools, Programs and Techniques

Our Employee Assistance Program (EAP) provides employees with counseling, financial, legal and work-life balance resources to help them be well — physically, financially and emotionally.

In the U.S., our Wellness program provides a variety of activities, such as Your Own Way and Fit Pass bonus points to help our employees be fit for duty. In FY17, we opened our Wellness program to employee spouses and domestic partners.

### FY17 Highlights

AECOM offices across the globe installed advanced technology and common spaces to drive collaboration and employee flexibility, as well as reduce our environmental impact. We selected furniture that was ergonomic, cost-effective and built to last.







# OUR RESULTS

When we report incidents through IndustrySafe, we reduce our number of injuries and illnesses and improve our safety results. Additional actions to help improve our performance include: safety training, Senior Management Observations, systems assessments, Project Safety Reviews and safety observations.

**“WE CLOSED FY17 WITH  
OUR STRONGEST SAFETY  
RESULTS TO DATE.”**

**Andy Peters**  
Chief Safety Officer



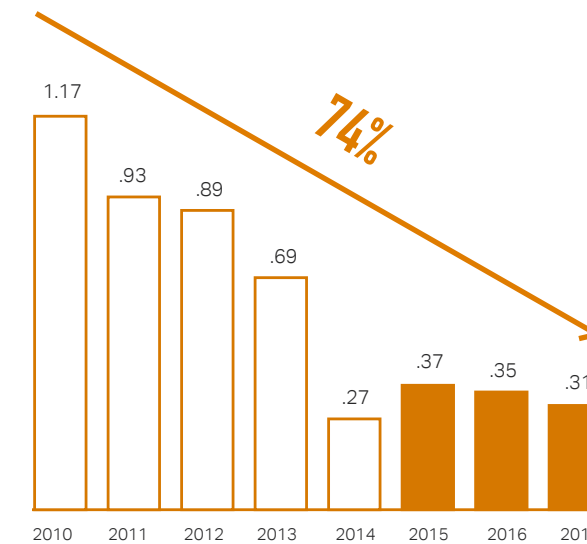


# HOW WE MEASURE

**SINCE FY10, WE HAVE  
DECREASED OUR TRIR BY  
74% AND LWCR BY 93%.**

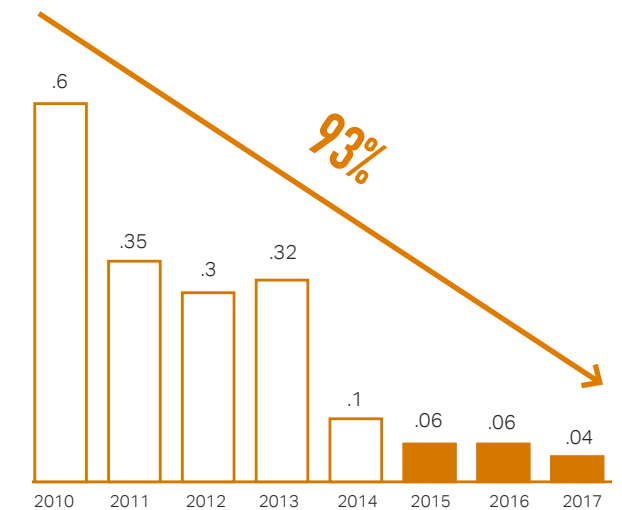
We measure our safety performance with Total Recordable Incident Rate (TRIR) and Lost Workday Case Rate (LWCR), the two most common industry standards. A TRIR is the aggregated number of work-related incidents that result in injury, medical attention and absence from work. LWCR is a subset of TRIR; it is the number of work-related incidents that result in absence from work.

**Total Recordable Incident  
Rate (TRIR) Performance**  
2010-2017




The TRIR is a mathematical calculation used by Occupational Safety and Health Administration (OSHA) that describes the number of employees per 100 full-time employees who have been involved in an OSHA-recordable injury or illness. Incident rates are collected on a per-company basis and are then aggregated by various categories.

**Lost Workday Case  
Rate (LWCR) Performance**  
2010-2017



The LWCR is also a mathematical calculation used by OSHA that describes the number of lost time cases per 100 full-time employees in any given time frame.

 Based on combined  
AECOM and legacy  
URS performance





# RECOGNITION

When our safety performance is strong, professional associations, government agencies, civic organizations and industries take notice. Our stance on safety excellence was recognized with prestigious awards in FY17.



## Voluntary Protection Programs

Three AECOM sites, various locations, United States.



## 1 million safe hours worked

AECOM IKEA Jinan store team was awarded by our client because of outstanding safety performance in 1 million working hours without a Lost Work Case.



## National Safety Council

AECOM received multiple Workplace Safety Awards from the National Safety Council in 2017.

**208** Occupational Excellence Achievement Awards

**91** Perfect Record Awards

**15** Million Work Hours Award

**9** Industry Leader Awards

**2** Superior Safety Performance Awards

**1** Safety Leadership Award



## Initiative of the Year Award

Construction Innovation Awards HSE Initiative of the Year: AECOM's Life-Preserving Principles Campaign, Abu Dhabi, United Arab Emirates.



## 2017 Robert W. Campbell award finalist

The international Robert W. Campbell Award recognizes organizations that achieve excellence through the integration of environmental, health and safety management into business operations.



## Derek Smyth Safety Leadership Gold Award

Commended approach to safety leadership, AECOM Hong Kong, Blue Whale Project Team Safety Star Program.



## Gold Award

Deephams Wastewater Treatment Works, London, England, United Kingdom, in a joint venture with Murphy Kier.



2017 NSC Rising Star

## Jennifer Mabry, Rising Star

Director, SH&E, Management Services, received one of NSC's 2017 Rising Stars of Safety. Jennifer is the seventh AECOM employee to receive this award since it was introduced in 2010.



# SAFETY STORIES AND INSIGHTS

A project's safety score is measured by criteria based on our Life-Preserving Principles.

## THREE PROJECTS RECEIVED A PERFECT PROJECT SAFETY REVIEW SCORE; THE FIRST TIME IN AECOM HISTORY.

Here are videos and stories from our top scoring projects:

### DEEPHAMS WASTEWATER TREATMENT WORKS

Insights From: Ashley Weyell,  
Project Director



"One of our team members left to work on another project, then came back because he preferred the safety culture here."

### TENNESSEE VALLEY AUTHORITY SHAWNEE CLEAN AIR PROJECT

Insights From: Jayme Hobson,  
Environment, Safety and  
Health Manager



"The equipment we work around doesn't know we're human, it will act as designed."



## TENNESSEE VALLEY AUTHORITY SHAWNEE CLEAN AIR PROJECT

### SAFETY SCORE: 100

**Location:** West Paducah, Kentucky, United States

**Client:** Tennessee Valley Authority

**Insights From:** Jayme Hobson, Environmental, Safety and Health Manager

#### Overview

At the Tennessee Valley Authority (TVA) Shawnee clean air project, AECOM is responsible for installing dry scrubbers to remove sulfur dioxide emissions to make the plant more compliant with clean air regulations and also constructing and managing a dewatering facility.

The Shawnee plant remains operational during ongoing construction with as many as 350 employees on-site during peak workflow.

#### Accomplishments

- 100 percent Project Review Score
- 1.5 million hours of accident-free work
- AECOM assessment states: “This team should be looked at as a model for SH&E culture for other large construction/turn-around projects” and that the rewards and recognition programs “are some of the best within the company and have proven to be effective.”

#### Challenges and Solutions

**The number of employees, sub-contractors and the variety of operations on-site make the site congested.**

Training is viewed as one of the most effective ways to embed safety expectations before employees step foot on-site.

**Falling objects were identified as a safety hazard. If a tool falls from height, it could kill someone.**

A program is in place to tether 100 percent of tools to avoid any tools from falling.



“The equipment we work around doesn’t know we’re human, it will act as designed, so any slip in safety procedures can result in a serious incident. I love my job, but like most it is stressful at times. I have to think about what is the worst that can happen and then make sure that preventative measures are in place.”

**Jayme Hobson STS-C, CSP**  
Environmental, Safety  
and Health Manager





## PUEBLO CHEMICAL AGENT DESTRUCTION PILOT PLANT (PCAPP)

### SAFETY SCORE: 100

**Location:** Pueblo, Colorado, United States

**Client:** Bechtel

**Insights From:** Mike Dittman, Project Specialist

#### Overview

The Pueblo Chemical Agent Destruction Pilot Plant (PCAPP) is a facility responsible for the safe destruction and disposal of more than 2,600 tons of mustard gas agent. AECOM is responsible for the systemization, pilot testing, operations and ultimate closure of the plant.

AECOM employees are directly involved in the destruction of chemical weapons among other safety management operations which exist in both toxic chemical agent work and industrial settings. Human interface and robotics are utilized for the removal and handling of the explosive materials.

#### Accomplishments

- 100 percent Project Safety Review score
- 3 million hours of accident-free work
- Facility achieved Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP) Star status

#### Challenges and Solutions

**The destruction of chemical weapons is dangerous and can be hazardous.**

Our Employee Led Teams (ELT) deliver hazard identification training through simulation exercises where a hazard is present and employees need to work through the appropriate response.

**Regular assessments must be made to identify and respond to risks before they become issues.**

Health Hazard Inventories (HHIs) assign and identify the appropriate control measures needed to mitigate risk associated with locations, tasks and positions of employees. AECOM employees conduct regular inspections and assessments to identify and address industrial and highly hazardous chemical threats to on-site personnel.



“Training and orientation are critical components of how we guarantee safety on such a potentially hazardous site. The amount of management effort that goes into creating this culture cannot be overstated.”

**Mike Dittman,**  
Project Specialist



## DEEPHAMS WASTEWATER TREATMENT WORKS (WWTW)

### SAFETY SCORE: 100

**Location:** London, United Kingdom

**Client:** Thames Water

**Insights From:** Ashley Weyell, Project Director

#### Overview

Deephams Wastewater Treatment Works (WwTW) plant is one of the largest in the United Kingdom. AECOM is part of a joint venture (JV), with Murphy and Kier, that is upgrading the plant to increase its capacity to respond to growing demands. AECOM is responsible for the design of all civil, structural, tunnelling and hydraulic elements of the project.

The joint venture team is responsible for ongoing operations of the site, including effluent quality during demolition and construction. This is one of three concurrent projects underway at the plant, which makes the site extremely congested.

#### Accomplishments

- AECOM's first-ever 100 percent Project Safety Review score
- 2.5 million hours of accident-free work
- AECOM assessment states that this is an "Excellent project with many best practices deployed to advance SH&E. Ashley Weyell is very committed to leading the safety process and is visible in the field. The JV has a strong safety manager."

#### Challenges and Solutions

##### **The workforce is culturally diverse.**

Safety training and orientation is delivered in multiple languages and consistency is emphasized at the supervisor level. Supervisors work with their teams daily to assess the safety challenges related to that day's activities.

##### **Three companies are operating in close proximity, which could lend itself to inconsistent procedures and differing expectations.**

Each of the JV partners believe safety is non-negotiable and agree to adopt another team's procedures if they prove to be a safer way of working.

##### **The site is congested and loud with many machines operating at once.**

Operators are all connected by radio and a coordinator was made responsible for controlling traffic.



"AECOM's safety culture is reinforced by the quality of our JV partners. Safety on-site is non-negotiable and it is tough to determine where one operation starts and another begins. That high level of commitment to safety permeates throughout the entire work site and enables us to focus on spills — which elsewhere could be considered minor incidents — as the biggest issues on-site."

**Ashley Weyell**  
Project Director





## ARKANSAS NUCLEAR 1 SHUTDOWN HEAT EXCHANGER PROJECT

### SAFETY SCORE: 97

**Location:** Russellville, Arkansas, United States

**Client:** Entergy

**Insights From:** Charles Bailey, Project Manager

#### Overview

Arkansas Nuclear 1 is the only nuclear power plant in Arkansas, United States. The plant is home to two pressurized water reactors.

In 2017, AECOM led the fast-track removal of structural, mechanical and electrical interferences as part of the removal and replacement of two shutdown cooling heat exchangers for the pressurized water reactors.

The job required the removal and replacement of equipment totaling about 50,000 pounds from the basement of the building and the removal of walls — all while the plant is undergoing an outage.

#### Accomplishments

- 97 percent Project Safety Review score
- Zero incidents and zero employee turnover since project start in 2015

#### Challenges and Solutions

**Silica inhalation, even in small quantities, can cause lung diseases and cancer.**

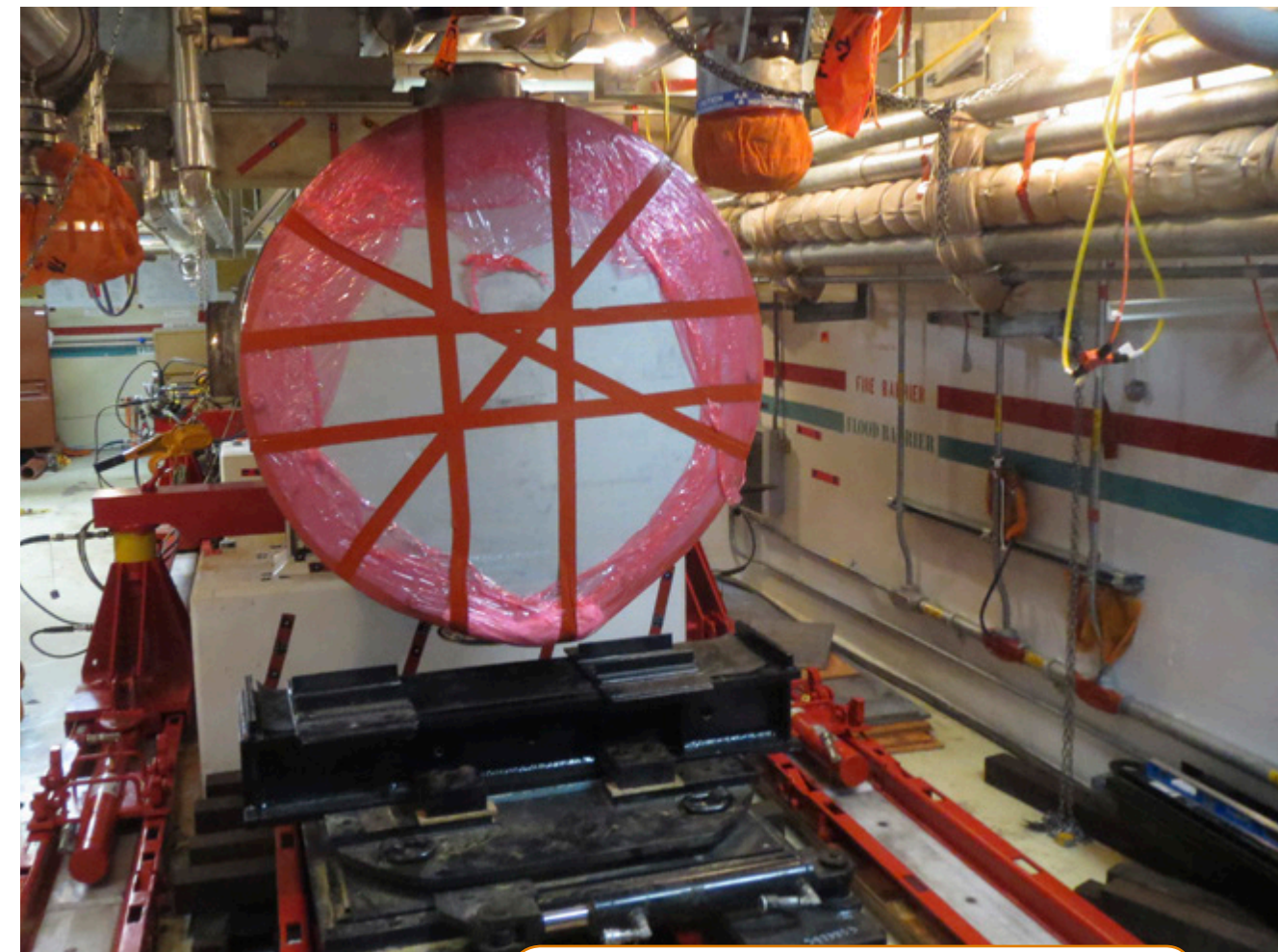
We created airtight rooms and provided appropriate personal protective equipment at all times.

**The project took control of an access point within the plant requiring the team to work around plant employees.**

A specialized crane, called a spider crane, was used, and the movement of all materials was carefully coordinated.

**The work required the team to breach multiple fire barriers, introducing a constant risk of fire.**

A 24/7 fire watch was implemented and a trained individual, who was specifically trained in fire watch and adept at recognizing and responding to potential fire situations, was present at all times.



“Safety was a major priority for our client. Our ability to perform these types of critical lifts safely was why Entergy wanted our team on this project. The project called for safety on the forefront at all times.”

**Charles Bailey**  
Project Manager





## APS FOUR CORNERS — SELECTIVE CATALYTIC REDUCTION (SCR)

### SAFETY SCORE: 97

**Location:** New Mexico, United States

**Client:** Arizona Public Service (APS)

**Insights From:** Tim Beale, Construction Services, Power Division

#### Overview

The APS Four Corners Selective Catalytic Reduction (SCR) project will improve air quality for residents of the Navajo Nation, surrounding areas, as well as provide employment opportunities.

AECOM is responsible for the engineering, procurement, construction and start-up services to design, install and commission SCRs and related systems at the power plant. The SCRs for these 800-megawatt coal-fired units are the two tallest in the United States and will reduce nitrogen oxide and sulfur trioxide emissions.

The team had to contend with a variety of construction and chemical hazards, including lead paint, asbestos, silica and fly ash — which required identification, removal and continuous monitoring during the installation phase. The project also included more than 500 critical crane lifts — crane lifts over operating equipment or exceeding 75 percent of the crane's capacity — requiring engineered rigging and lift plans.

#### Accomplishments:

- 97 percent Project Safety Review score
- 1.9 million hours of injury-free work
- Won the 2017 President Safety Achievement Award for Outstanding Safety Performance for completing 1.5 million hours without a lost time

#### Challenges and Solutions

**We were responsible for the safety of 550 workers.**

Each person was required to prepare at least one "conversation card" per week to demonstrate how he or she improved their knowledge of safety best practices.

**The work performed on the site is difficult, and the team needs to prevent minor issues from becoming injuries.**

The project team included an on-site nurse who helped workers with first-aid treatment and answered health-related questions.



"The project's successful safety record is a direct result of the entire team, from project management to front-line crafts people, driving and implementing an active safety culture to ensure all are 100 percent engaged, committed and accountable for project safety."

**Tim Beale**  
Construction Services, Power Division





## TERMINAL 3 MODERNIZATION

### SAFETY SCORE: 95

**Location:** Phoenix, Arizona, United States

**Client:** Phoenix Sky Harbor International Airport

**Insights From:** Chris Rapp, Project Director

#### Overview

The Phoenix Sky Harbor International Airport is a busy hub in Arizona, United States, but its facilities and terminals were antiquated and in need of an update. Our AECOM Hunt team is part of a joint venture with Austin Commercial that was selected by the City of Phoenix to manage the US\$590 million design-build project to modernize the terminal. AECOM Hunt is the managing partner of Hunt Austin, a joint venture, which holds the full design-build contract with the City of Phoenix.

The job site team is comprised of a nearly 50/50 split between AECOM Hunt and Austin staff. The AECOM Hunt team has a pre-qualification process and full power on sub-contractor selection, with the responsibility of mitigating poor performance related to safety and production of our selected sub-contractors.

#### Accomplishments

- Zero injury record to date
- Won numerous awards, including *Engineering News-Record's* 2017 Regional Best Project award for the Arizona/New Mexico region

#### Challenges and Solutions

**The Phoenix construction market has seen a large influx of workers who are on the first commercial construction project of their careers.**

Each day management walks through work areas to speak with employees about safety.

**The public, Transportation Security Administration (TSA) and airline workers had to be protected from health and safety hazards because the terminal had to remain open during our involvement.**

The team maintained a trained focus on safety. Sub-contractors were commended for using the safest practices available when dealing with silica, for example.



“Safety is infused into the culture on the project and is a key element of everything the team does. Daily safety audits are completed by approximately 10 percent of the project’s staff — typically four individuals — on a random, rotating basis. One of the four is a superintendent, while the others are engineers, management and even document control staff, and all are able to contribute their unique perspective to these safety walks.”

**Chris Rapp**  
Project Director



## LANDSLIP PREVENTION AND MITIGATION

### SAFETY SCORE: 95

**Location:** Hong Kong, North and West territories

**Client:** GEO/CEDD

**Insights From:** Dennis Lau, Resident Engineer

#### Overview

In recent decades, a series of landslides across Hong Kong's territories have tragically caused loss of life and a significant amount of property damage. AECOM was selected by the government to oversee contract management for the improvement of 26 slopes. With only 13 employees and 35 contractors working on the upgrade, the team's model for safety provides lessons for projects of any size.

At the start of the project, contractors were accustomed to doing work manually, which resulted in inconsistency. Management wanted to create one common approach to working. To achieve this, everyone was included in pre-planning activities and discussions on how to improve current procedures. They were encouraged to use machinery to help reduce injuries and improve stamina.

#### Accomplishments

- Zero accidents over a two-year period
- Received quarterly safety award from the client
- Hosted a presentation for the Hong Kong Institute of Engineers to share our practices designed to increase production efficiency and work more safely

#### Challenges and Solutions

**Slopes were spread across different territories, making timely communication among the team difficult.**

In addition to sharing tailored "toolbox talk" tips, workers used WhatsApp, a mobile app, to share and receive messages no matter where they were on-site.

**In work areas, spilled cement grout could cause severe eye damage.**

The team implemented a low-cost and easy-to-handle protective shield.



"To ensure safe working, it was critical to eliminate manual work and use machinery. At first, our workers were reluctant to change their ways of working, so involving everyone in pre-planning discussions was key. We were a small but mighty staff."

**Dennis Lau**  
Resident Engineer





## UPGRADING SLOPES IN THE SOUTHERN REGIONS

### SAFETY SCORE: 95

**Location:** Southern regions, Hong Kong

**Client:** Lands Department

**Insights From:** Edward Chow, Senior Resident Engineer

#### Overview

More than 200 slopes across Hong Kong's southern regions were identified as a threat to the public and environment because of a landslide risk. To prevent a catastrophe, AECOM was appointed to design and construct safer slopes, retaining walls, landscapes and drainage systems.

On-site supervisors encouraged all contractors and junior staff to lead and participate in safety and health events and identify ways to elevate existing practices. A contractor introduced solutions that addressed two reoccurring problems:

- Reusable goggles with an anti-scratch coating
- A coupler to reduce air hose bursts

Leaders took notice and encouraged the contractor to enter his solutions in the Development Bureau's "Innovative Safety Initiative Award" competition. As a result, these safer and more durable innovations were adopted by fellow practitioners.

#### Accomplishments

- Zero recorded injuries between 2016 and 2017
- The government department invited project team members to give a presentation on how they safely responded when a bomb was discovered on-site (upon research, Edward found that these bombs were hidden as a result of World War II)
- Received awards from the Hang Hau Rural Committee and the Sham Tseng Chiu Kiu Kai Fong Yu Laan community in gratitude

#### Challenges and Solutions

**Several sites were in densely populated areas, where residents could be exposed to noise and dust.**

Construction was completed using low-noise machinery and protective tools to shield residents from dust.

**High temperature during summer months was a key health hazard.**

Workers were provided with work-rest cycles based on ambient heat burden.



"Our top management communicated clear safety goals for how we worked and acted. We received many letters of appreciation from the community for our construction service. On the project site, we encouraged everyone to become a safety leader by participating in safety walks, organizing safety campaigns and recognizing safe habits."

**Edward Chow**  
Senior Resident Engineer



## MEDICINE HAT COMPRESSOR STATION

### SAFETY SCORE: 94

**Location:** Medicine Hat, Alberta, Canada

**Client:** TransCanada Pipeline Limited (TCPL)

**Insights From:** Jeff Johnston, Senior Director, Productivity, Canada Oil & Gas

#### Overview

The Natural Gas Compressor station in Medicine Hat, Alberta, Canada, is the engine that powers gas through the TransCanada Pipeline (TCPL) and into the city for 63,260 residents. This is the only supply of natural gas, which heats homes and provides power to industrial plants.

AECOM spearheaded the construction of the station. In partnership with TCPL, we introduced a cutting-edge modular design that reduced construction time, costs and provided a safer approach. This new method, combined with a strong client relationship and shared respect among all workers, laid the groundwork for an additional TCPL compressor station build involving modularizing innovation in the future.

#### Accomplishments

Zero injury record since project start date in 2015

#### Challenges and Solutions

**Transporting 81 loads of building components across the border in freezing weather posed a logistical challenge for TCPL.**

We became the single point of contact for all load coordination, which reduced time and logistical complexities.

**The main pipeline had to remain in service throughout the project and required a special nozzle to allow the bypass line to carry natural gas into the city.**

The team was required to attend elevated training and complete daily task hazard cards to ensure work was done successfully and safely.



"If one of my employees was lifting an object with a heavy crane in minus 30 degrees Celsius weather, I would be right there to help. We instilled a 'brother's keeper' mindset that extended beyond our work. Our secret to success was simple — we left our titles at the door and involved everyone in safety planning."

**Jeff Johnston**  
Senior Director, Productivity, Canada Oil & Gas



## About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital.

A *Fortune 500* firm, AECOM had revenue of approximately \$18.2 billion during fiscal year 2017. See how we deliver what others can only imagine at [aecom.com](http://aecom.com) and [@AECOM](https://twitter.com/AECOM).