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January 10, 2019

Final Remediation Plan

A Market Place
1536 E. River Road
Belen, New Mexico
Valencia County

NMED PSTB Facility ID No. 26331
NMED PSTB Release ID No. 2869
NMED PSTB Deliverable ID No. 4000-2

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List of Acronyms

µg/L	micrograms per liter
AECOM	AECOM Technical Services, Inc.
bgs	below ground surface
CFR	Code of Federal Regulations
COC	contaminants of concern
DPT	direct push technology
EPA	Environmental Protection Agency
FRP	Final Remediation Plan
GWQB	Groundwater Quality Bureau
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEAL	Hall Environmental Analytical Laboratory
H&S	Health and Safety Plan
mg/L	milligrams per liter
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
PSTB	Petroleum Storage Tank Bureau
Site	A Market Place Site
TDS	total dissolved solid
UIC	Underground Injection Control
VOCs	volatile organic compounds

FINAL REMEDIATION PLAN

Site Name:	A Market Place
Site Address:	1536 E. River Road Belen, New Mexico
Facility ID Number:	26331
Author/Consulting Company:	AECOM One Park Square 6501 Americas Parkway, N.E. Suite 900 Albuquerque, NM 87110
Date of Confirmation of Release:	1996
Date of Document:	January 10, 2019

1 Introduction

AECOM Technical Services, Inc. (AECOM) has prepared this Final Remediation Plan (FRP) for the A Market Place site (Facility ID No. 26331) State Lead Site in accordance with New Mexico Environment Department Petroleum Storage Tank Bureau (NMED PSTB) Professional Services Contract No. 19-667-3200-0001, Task 2, *Final Remediation Plan* and New Mexico Petroleum Storage Tank Regulations New Mexico Administrative Code (NMAC) 20.5.119.1923.

1.1 Site Description and Background

The A Market Place site (Site) is located at 1536 E. River Road in Belen, New Mexico (Figure 1). The Site is currently occupied by an auto repair/tire retailer and adjacent to a veterinary clinic to the south, Valencia Animal Clinic. The land use immediately north and west of the Site is made up of rural private housing with a few scattered businesses. Further north, the area is used for agricultural purposes. The Rio Grande River is approximately a quarter mile east of the site. Groundwater monitoring at the Site was initiated as the result of a confirmed release in 1996. Since then, groundwater monitoring has been conducted infrequently, until quarterly monitoring resumed in February 2015. There are currently five active monitor wells (MW-2, MW-3, MW-4, MW-6, and MW-7). Monitor wells MW-1 and MW-5 were abandoned in 2009. The depth to water ranges from 4.0 to 5.0 feet below ground surface.

Previous investigations and groundwater monitoring have determined that a dissolved-phase petroleum plume is present beneath the site in the immediate vicinity of MW-3 and MW-4 (Golder 2013). Free phase hydrocarbon was detected, as a heavy sheen in samples from MW-3 between July 2007 and March 2010. The sheen has not been observed since March 2010. The dissolved phase plume is defined to the east by MW-2 and to the south by monitoring wells MW-6 and MW-7. There is currently no delineation to the north or west up-gradient of the former tank pit. The constituents of concern in the dissolved-phase plume consists of benzene, toluene, ethylbenzene and xylenes (BTEX) and naphthalene.

1.2 Site Geology and Hydrology

The thickness of the unsaturated zone, at the site, varies from four to five feet. Soils in the unsaturated zone consist of alternating gravelly sand and clay. Sands are generally medium grained and are brown to dark brown in color. Clays are generally plastic with red and dark brown mottling. The soils below the water table consist of unconsolidated sand with some clay and gravel (Souder Miller, 2006). The most recent groundwater gauging event was performed in April 2018. During this event, depth to water averaged 4.69 feet below ground surface (bgs). Groundwater levels have declined by an average of 0.17 feet from the previous gauging event in February 2018. Groundwater levels at the site can vary by as much as 1 foot per year however; overall levels have remained consistent since gauging began (AECOM, 2018). In April 2018, groundwater flowed at an approximate gradient of 0.0006 feet per feet to the southeast, relatively consistent with historic conditions.

1.3 Contaminant Distribution

In April 2018, the benzene concentration of 64 micrograms per liter (µg/L) from monitoring well MW-3 and 35 µg/L at MW-4 exceeded the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards for benzene (10 µg/L). The petroleum constituents toluene, ethylbenzene, and xylene have consistently been detected in monitoring wells MW-3 and MW-4 however; these constituents have not exceeded their respective NMWQCC groundwater standards since 2007. Monitoring wells MW-1, MW-2, MW-5, MW-6, and MW-7 have not had detections of petroleum constituents since 2007. No other monitoring wells had petroleum constituents exceeding NMWQCC groundwater standards at the site. Since at least 2006, dissolved benzene concentrations from monitoring wells MW-3 and MW-4 have consistently exceeded the NMWQCC groundwater standard.

2 Remediation Goals and Target Concentrations

AECOM has selected a treatment technology that will meet remediation goals and be protective of receptors for the following exposure pathways:

- Groundwater ingestion,
- Worker dermal exposure to groundwater,
- Soil leaching to groundwater (less likely), and
- Contaminant leaching to surface water (less likely).

The contaminant source material has been removed and remaining contamination consists of dissolved phase benzene in groundwater. As a result, remediation goals are related to constituent concentrations in groundwater and not soil in the vadose zone. The remediation goals for groundwater at the Site are included in **Table 1** below.

Table 1. A Market Place Remediation Goals

Constituent of Concern	Groundwater Standards 20.6.2.2103 NMAC
Benzene (primary)	10 µg/L
Total Dissolved Solids (post injection)	1000 mg/L

Notes:
µg/L = micrograms per liter
mg/L = milligrams per liter
NMAC = New Mexico Administrative Code

2.1 Rationale

BOS 200® (injectate) has been selected as the remedial option to trap and treat® the remaining dissolved phase benzene contamination with concentrations in groundwater above the NMWQCC groundwater standard at the Site. Once injected, BOS 200® is non-reactive to Site geochemistry and is effective under aerobic and anaerobic conditions and over a broad range of pH. There are no toxic byproducts remaining in groundwater following injection. The injectate acts as a complete system, promoting accelerated biodegradation of various organic compounds on an activated carbon platform that includes micro and macro nutrients, time release terminal electron acceptors, and a blend of facultative organisms designed to flourish within the aerobic to anaerobic conditions present in the pore structure of the carbon. A BOS 200® product sheet is included in **Attachment A**.

The A Market Place Site conditions are ideal for the BOS 200® injections. The shallow groundwater contamination interval of 4 to 5 feet bgs provides for effective delivery to the impacted areas using direct push technology (DPT). The subsurface soil lithology consisting of alternating sands and gravels is offers maximum distribution of the BOS 200® in the groundwater.

Given the high pedestrian traffic and retail operations in the area, public safety was a major consideration in our selection of BOS 200®. BOS 200® is a safe product and can be applied in the subsurface with very low potential for contact with pedestrians in the area. Also, based on the injection grid spacing (Section 2.2), the treatment area will not extend south into E. River Road.

2.2 Remediation Approach

The treatment area is approximately 680 square feet and encompasses monitoring wells MW-3 and MW-4 where dissolved benzene hot spot persist (**Figure 2**). An approximately 30 feet by 30 feet injection grid will be established around the monitoring wells (MW-3 and MW-4). Twenty-seven injection points will be evenly spaced on approximate 5 foot centers on a triangular spacing throughout the grid. The injection points will be staggered along each row to ensure overlap and maximum distribution of injectate. The vertical treatment horizon is approximately 4 to 14 feet bgs with injection intervals of 2 feet for a total of 5 injection intervals per injection location. The vertical injection interval starts at 4 feet bgs and terminates below the water table at 14 feet bgs.

Monitoring wells MW-3 and MW-4 will not be used as injection points and injection locations will be located as far as possible away from the these wells. **Figure 2** illustrates the treatment areas, injection grid, and current plume geometry for the contaminants of concern (COC) (benzene and naphthalene).

The Site design takes into account the dissolved benzene exceedances in MW-3 and MW-4. A benzene concentration of 200 µg/L was used in the design criteria for the activated carbon absorption standpoint. The injection process will be conducted using a Geoprobe 7000 series track mounted DPT rig equipped with a 2-inch diameter injection probe. A target injection rate of approximately 20 gallons per minute will be maintained starting from the top of the interval (4 feet) and advancing downward in two foot intervals. The DPT contractor (Vista Geosciences) is certified to perform BOS 200® injections. **Attachment B** summarizes the injection design dosing, injection depth intervals, pounds of reagent, injection volumes and rates, interval and grid spacing, and starting and ending points of the injection interval. The equipment list including specifications is included in **Attachment C**.

Concentrations of dissolved benzene in monitoring wells MW-3 and MW-4 will decrease immediately after injection due to carbon absorption (trapping) and the biological processes will continue until either the contaminant is eliminated or the terminal electron acceptors are depleted. It is estimated that the duration of the in situ process will take approximately 12-18 months to complete in terms of overall contaminant reduction. Long term monitoring of the site is not part of the scope of work for FRP.

Following BOS® 200 injections, monitoring wells MW-3 and MW-4 will be redeveloped to remove any remaining slurry from wells screens. The monitoring wells will be swabbed throughout the screened interval and hand bailed or pumped to remove unused slurry material. The groundwater will remain discolored for a few days but will clear up over time. A field data form and log book will be used to document volume injected at each location, pump rate, depth and interval of injection grids, and any issues with injection based on subsurface conditions.

3 Pre and Post Injection Groundwater Monitoring

Prior to injection, groundwater samples will be collected from monitoring wells MW-2, MW-3, and MW-4 and submitted for analyses of total dissolved solids (TDS) by SM 2540C and volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) method 8260. The samples will be collected by first purging the well of three casing volumes using a peristaltic pump. During purging, water quality measurements will be collected at a minimum of every casing volume for temperature, pH, specific conductance, oxidation reduction potential and dissolved oxygen. Water quality measurements will be collected using a Horiba U-52 water parameter probe and flow through cell. The Horiba U-52 will be calibrated prior to each day of use in accordance with manufacturer specifications and calibration data will be recorded in the field notes. Purge water will be discharged to the ground surface to evaporate within the site boundaries. Following well purging, a groundwater sample will be collected by slowly lowering a new disposable bailer into the well and decanting into pre-cleaned, acid-preserved sample containers. Groundwater samples will be placed on ice and delivered to Hall Environmental Analytical Laboratory (HEAL) under chain of custody within the required holding times. Investigation derived waste will be disposed as no hazardous waste.

After 60 days following injection, groundwater samples will be collected from the three monitoring wells and analyzed for VOCs (EPA 8260) and TDS (SM 2540C). The post injection samples will be compared to the pre-injection sample analysis to determine the effectiveness of the injection process. Ongoing treatment may be occurring following the 60 day period and subsequent sampling events will be needed to determine the final concentrations of contaminants in groundwater.

4 Required Permits, Notifications, and Schedule

AECOM has obtained an Underground Injection Control (UIC) General Discharge Permit from the NMED Groundwater Quality Bureau (GWQB) for the A Market Place BOS® 200 injection. A copy of the UIC permit is included in **Attachment D**. AECOM will subcontract a private utility locator to mark all utilities entering into the treatment area and notify New Mexico One-Call to mark the type and location of all public utilities along River Road.

The Petroleum Storage Tank Regulations, 20.5.119.1923.D (10) NMAC address notices to be provided to the public regarding the submission of a Remediation Plan for public comment. This notice is provided prior to the submission of the Remediation Plan and informs the public that the PSTB will be reviewing the Plan.

A published legal notice of the submission or planned submission of the final remediation plan at least twice in a paper of general circulation in the county in which soil or water has been contaminated by the release; the first notice shall appear within one week of, but not later than, the day of submission of the final remediation plan to the department; the second publication of this notice shall occur no later than seven days after the date the remediation plan is submitted to the department, and owners and operators shall submit two certified affidavits of publication from the newspaper to the department within 21 days after the date the final remediation plan is submitted. All adjacent property owners will be notified of the remedial activities by certified mail. Once completed, all copies of legal notices and letters will be included in **Attachment E**.

A schedule for implementation is provided in Table 2 below:

Table 2. A Market Place Isleta Implementation Schedule

Task	Duration	Start Date	End Date
Approval of NMED GWQB Underground Injection Permit	0	January 31, 2019	January 31, 2019
Pre-Injection Sampling	1	February 1, 2019	February 1, 2019
FRP Implementation	5	February 4, 2019	February 8, 2019
Post-Injection Sampling (60 day)	0	April 8, 2019	April 8, 2019
Reporting	10	April 9, 2019	April 26, 2019

Notes:

NMED GWQB = New Mexico Environment Department Groundwater Quality Bureau

FRP = Final Remediation Plan

5 Site Restoration

Following completion of remedial activities, the temporary injection boreholes will be backfilled with hydrated granular bentonite from the bottom of the borehole to just below the surface. The ground surface will be restored with asphalt patch or concrete to match the existing surface. All materials such as drums and solid waste along with all equipment will be removed from the site immediately following completion of the project. If necessary the surface of the parking lot will be cleaned with a power washer to leave the lot essentially identical to the original condition.

6 Health and Safety Plan

AECOM will prepare a Health and Safety (H&S) Plan covering all activities to be conducted at the site. The H&S Plan will be in accordance with Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard, 29 Code of Federal Regulations (CFR) 1910.120 or 29 CFR 1926.65, paragraph (b)(4). The H&S Plan will be reviewed and signed by all project team members before the start of work and will contain a hospital location map and outline safety procedures in the event on an on-site emergency. A copy of the Health and Safety Plan is included in **Attachment F**.

7 References

AECOM Inc. 2018. 2nd Quarter Groundwater Monitoring Report: A Market Place Site 1536 East River Road, Belen, New Mexico. May.

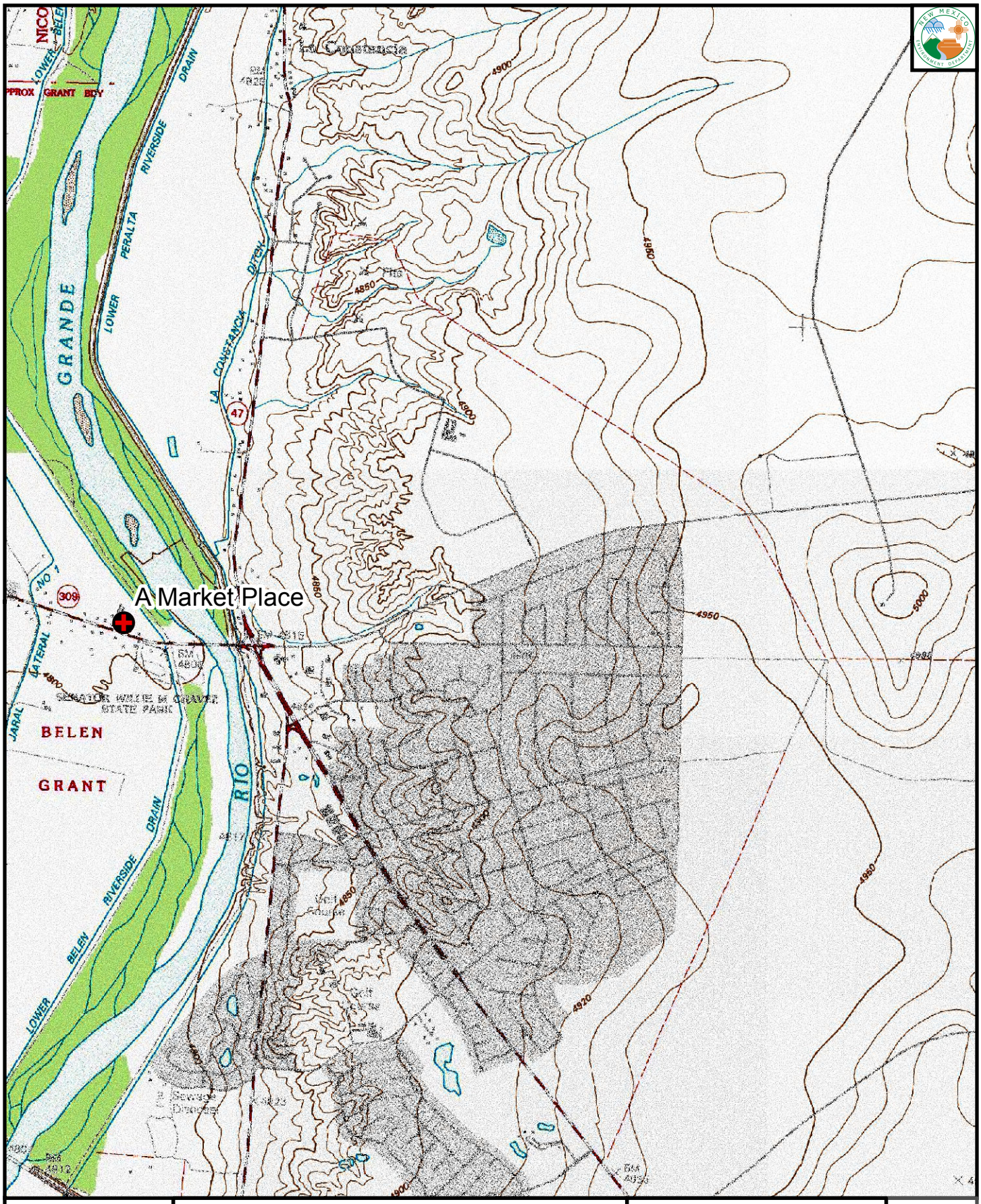
Golder Associates Inc. 2013. 2nd Semiannual Groundwater Monitoring Event and Report, A Market Place PSTB # 26331, 1536 East River Road, Belen, New Mexico. October 16.

AECOM Corporation. 2017. Work Plan Submittal for A Market Place (Facility ID No. 26331), Belen, New Mexico, Professional Services Contract # 14-667-2000-0032. October 2.

New Mexico Environment Department (NMED). 2003. Petroleum Storage Tank Bureau Regulations, 20.5 NMAC. July 2018.

Souder Miller and Associates. 2006. Minimum Site Assessment Report, A Market, 1536 E. River Road, Belen, NM Facility ID 26337.

Figures



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Source: USGS Tome 7.5 Minute Topo
http://rgis.unm.edu/

0 0.5 1 Miles

SITE LOCATION MAP

A MARKET PLACE
1536 EAST RIVER RD
BELEN, NM

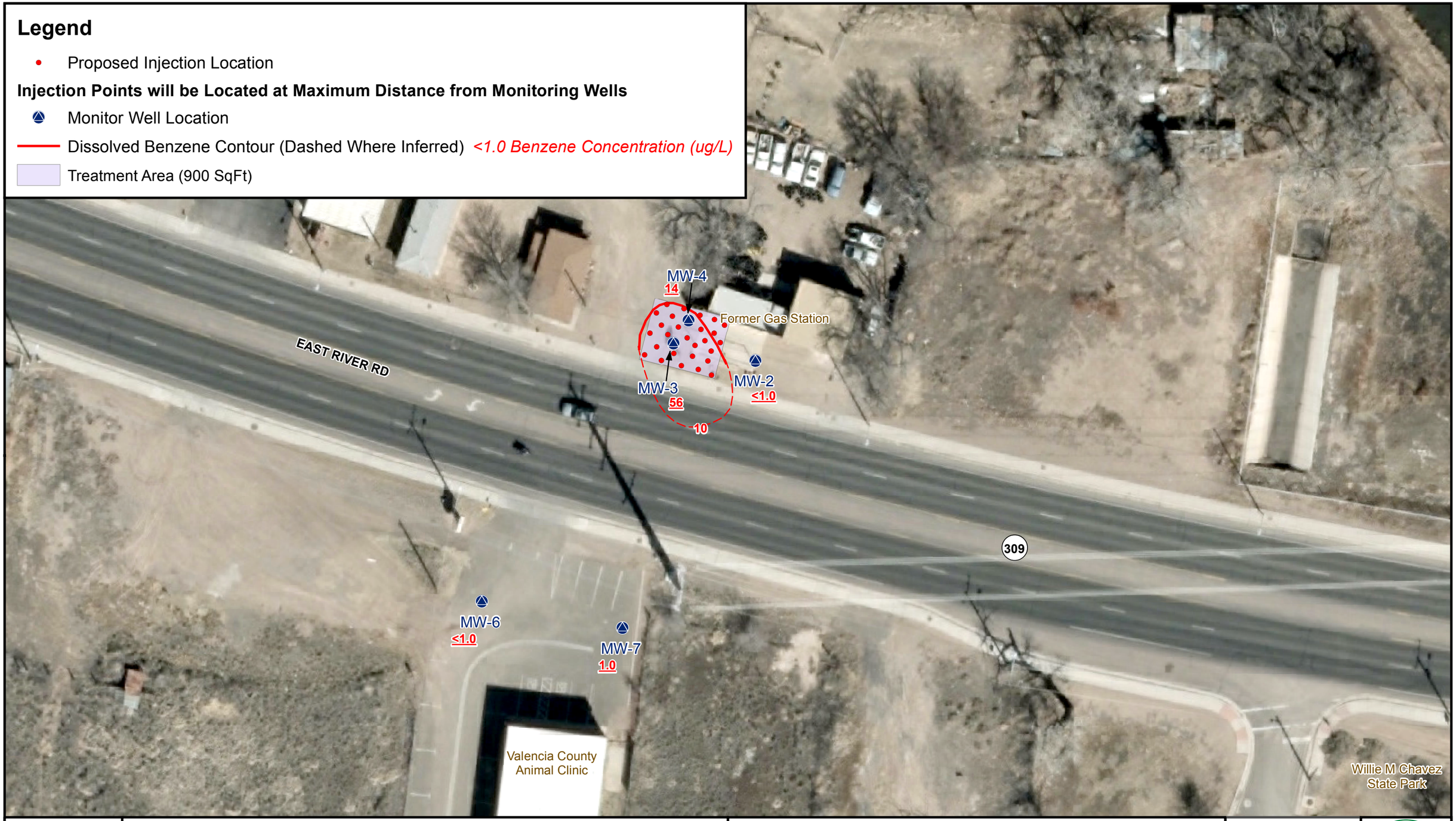
FIGURE 1

Legend

- Proposed Injection Location

Injection Points will be Located at Maximum Distance from Monitoring Wells

- Monitor Well Location
- Dissolved Benzene Contour (Dashed Where Inferred) *<1.0 Benzene Concentration (ug/L)*
- Treatment Area (900 SqFt)



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Source: MRCOG 2012 Digital OrthoImagery
http://rgis.unm.edu/

N

0 40 80 120 160 200 Feet

PROPOSED INJECTION LOCATIONS

A MARKET PLACE
1536 EAST RIVER RD
BELEN, NM

FIGURE 2

NEW MEXICO ENVIRONMENT DEPARTMENT

Attachment A BOS® 200 Product Mix

TRAP & TREAT® BOS 200®

Safety Data Sheet

Issued: 06/05/2015
Supersedes: 12/30/2011
Version: 1.0

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product identifier

Product name : Activated Carbon

Product form : Mixture

Product code : 3967

Other means of identification : Activated Carbon

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Adsorbent

1.3. Details of the supplier of the safety data sheet

Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA 15230
412-787-6700

1.4. Emergency telephone number

Emergency number : CHEMTREC (24 HRS): 1-800-424-9300

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

GHS-US classification

Combustible Dust H232

Not classified as a simple asphyxiant. Product does not displace oxygen in the ambient atmosphere, but slowly adsorbs oxygen from a confined space when wet. Under conditions of anticipated and recommended use, product does not pose an asphyxiation hazard.

2.2. Label elements

GHS-US labeling

Signal word (GHS-US) : **Warning**

Hazard statements (GHS-US) : H232 - May form combustible dust concentrations in air

2.3. Other hazards

Other hazards not contributing to the classification : Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/Information on Ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Activated Carbon	(CAS No) 7440-44-0	≥ 80
Gypsum (Hydrated calcium sulfate)	(CAS No) 13397-24-5	< 20

SECTION 4: First Aid Measures

4.1. Description of first aid measures

First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes.

First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use. However, dust may cause irritation and redness of the eyes, irritation of the skin and respiratory system. The effects of long-term, low-level exposures to this product have not been determined.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting Measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Carbon dioxide. Dry chemical. Foam. Sand.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Dust may be combustible under specific conditions. May be ignited by heat, sparks or flames.

Explosion hazard : Dust may form explosive mixture in air.

Reactivity : No dangerous reactions known under normal conditions of use. Carbon oxides, ammonia, or toxic halide fumes may be emitted upon combustion of the material.

5.3. Advice for firefighters

Firefighting instructions : Wear NIOSH-approved self-contained breathing apparatus suitable for the surrounding fire. Use water spray or fog for cooling exposed containers. Evacuate area.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Product is not soluble, but can cause particulate emission of discharged into waterways. Dike all entrances to sewers and drains to avoid introducing material to waterways. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust. Dispose of material in compliance with local, state, and federal regulations.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a cool, dry, and well-ventilated place. Keep away from ignition sources.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Activated Carbon (7440-44-0)*	
OSHA PEL (TWA) (mg/m³)	≤ 5 (Respirable Fraction) ≤ 15 (Total Dust)

Gypsum (Hydrated calcium sulfate) (13397-24-5)*	
OSHA PEL (TWA) (mg/m³)	≤ 5 (Respirable Fraction) ≤ 15 (Total Dust)

*Exposure limits are for inert or nuisance dust. No specific exposure limits have been established for this activated carbon product by OSHA or ACGIH.

8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas. Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

Personal protective equipment : Gloves. Safety glasses. Insufficient ventilation: wear respiratory protection.

Hand protection : Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

Eye protection : Use eye protection suitable to the environment. Avoid direct contact with eyes.

Skin and body protection : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection : Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granular, powder, or pelletized substance
Color	: Black
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: Not applicable
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: No data available
Auto-ignition temperature	: > 220 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: > 220 °C
Vapor pressure	: Not applicable
Relative vapor density at 20 °C	: Not applicable
Apparent density	: 0.4 - 0.8 g/cc
Solubility	: Carbon and gypsum are insoluble; fertilizer components are soluble
Log Pow	: Not applicable
Log Kow	: Not applicable
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid dust formation. Heat. Ignition sources. Exposure to high concentrations of organic compounds may cause bed temperature to rise.

10.5. Incompatible materials

Alkali metals. Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO_2). Ammonia. Toxic halide fumes.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Activated Carbon (7440-44-0)	
LD50 oral rat	> 2000 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Silica: Crystalline, quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
The International Agency for Research on Cancer (IARC) has classified "silica dust, crystalline, in the form of quartz or cristobalite" as carcinogenic to humans (group 1). However these warnings refer to crystalline silica dusts and do not apply to solid activated carbon containing crystalline silica as a naturally occuring, bound impurity. As such, we have not classified this product as a carcinogen in accordance with the US OSHA Hazard Communication Standard (29 CFR §1910.1200) but recommmend that users avoid inhalation of product in a dust form.	

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : Not classified

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use. However, dust may cause irritation and redness of the eyes, irritation of the skin and respiratory system. The effects of long-term, low-level exposures to this product have not been determined.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Waste treatment and disposal methods : Vacuum or shovel material into a closed container. Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

Additional information : Activated carbon is an adsorbent media; hazard classification is generally determined by the adsorbate. Consult U.S. EPA guidelines listed in 40 CFR 261.3 for more information on hazardous waste disposal.

SECTION 14: Transport Information

14.1. In accordance with DOT

Not classified as hazardous for domestic land transport

UN-No.(DOT) : None on finished product

DOT NA no. : None on finished product

Proper Shipping Name (DOT) : Not regulated

Department of Transportation (DOT) Hazard Classes : None on finished product

Hazard labels (DOT) : None on finished product

Packing group (DOT) : None on finished product

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : None on finished product

14.2. Transport by sea

Not classified as hazardous for water transport

IMO / IMDG

UN/NA Identification Number : None on finished product

UN- Proper Shipping Name : Not regulated

Transport Hazard Class : None on finished product

14.3. Air transport

Not classified as hazardous for air transport

ICAO / IATA

UN/NA No : None on finished product

UN- Proper Shipping Name : Not regulated

Transport Hazard Class : None on finished product

Packing Group : None on finished product

Marine Pollutant : None on finished product

14.4. Additional information

Other information : Under the UN classification for activated carbon, all activated carbons have been identified as a class 4.2 product. However, this product type or an equivalent has been tested according to the *United Nations Transport of Dangerous Goods* test protocol for a "self-heating substance" (*United Nations Transportation of Dangerous Goods, Manual of Tests and Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances)* and it has been specifically determined that this product type or an equivalent does not meet the definition of a DOT self-heating substance (class 4.2) or any other hazard class.

SECTION 15: Regulatory Information

15.1. US Federal regulations

Activated Carbon Profile 85	
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt.	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Cobalt (7440-48-4)*	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	0.1 %

*Present below de minimis level

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65

WARNING: This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, birth defects, or other reproductive harm.

Silica: Crystalline, quartz (14808-60-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	NA
Cobalt (7440-48-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	NA
Titanium dioxide (13463-67-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	NA

Aluminum oxide (1344-28-1)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right to Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Calcium sulfate (7778-18-9)
U.S. - Massachusetts - Right to Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Silica: Crystalline, quartz (14808-60-7)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right to Know List

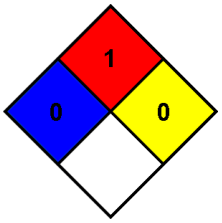
Gypsum (Hydrated calcium sulfate) (13397-24-5)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Ammonium Nitrate (6484-52-2)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List
Limestone (1317-65-3)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other Information

Indication of changes	:	Revision 1.0: New SDS Created.
Revision Date	:	06/05/2015
Other information	:	Author: CJS.
For internal use only	:	PR #85

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA health hazard	:	0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	:	1 - Must be preheated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	:	0
Flammability	:	1
Physical	:	0
Personal Protection	:	

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. The information is this document applies to this specific material as supplied. It may not be valid if product is used in combination with other materials. It is the user's responsibility to determine the suitability and completeness of this information for their particular use. While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Calgon Carbon Corporation makes no warranty with respect to the same, and disclaims all liability for reliance thereon.

Attachment B A Market Place BOS® 200 Design Mix

January 10, 2019

Client Name	AECOM
Project Location	**A Market Place,** Belen, NM

		MW-3/4 Treatment Area
		Notes
Site Information	Predominate Geology of Treatment Zone	Clay/Sand ~10 ft bgs
	Treatment Zone Area (ft^2)	680
	Contamination Depth Start (ft bgs)	4.0
	Contamination Depth End (ft bgs)	14.0
	Triangular Grid Spacing (ft)	5.0
	Number of Injection Points - Design	27
	Injection Interval Distance (ft)	2
	Number of Injection Intervals per Point - Design	5
	Total Number of Injection Intervals	135
Speciated COC Design Calculations	Contaminant of Concern	Benzene
	Design Basis Soil (mg/kg) or Groundwater (mg/L)	Groundwater
	Design Concentration	0.200
	Design Endpoint	0.005
	Contaminant of Concern Mass Loading (lb/ft^3)	3.74E-06
	BOS 200 per Injection Interval - Design (lb)	15
	BOS 200 Slurry Volume per Interval (gal)	10-15
	Average BOS 200 per Injection Point (lb)	83
	BOS 200 Total (lb)	2,228
Trap & Treat Bacteria Calculations	Bacteria Concentrate (gal)	4

Attachment C List of Remediation Equipment

System design	Clean-Inject®
Injection flow rate	Up to 35 gallons per minute
Injection pressure	Up to 1,200 psi
Pump type	5 diaphragms, positive displacement
Injection pump horsepower required	30 hp, variable frequency drive; 0-1150 rpm
Pump compatibility	Stainless steel with Viton diaphragms
Blended injectate measuring	Float system
Mixing tank	200 to 300 gallons, stainless steel
Bulk carbon handling	1,000 lb. supersacks
Powder weighing system	Load cell, 5000 lb. capacity, 0.1 lb. accuracy
Mixing tank additive provisions	18” manway + liquid additive (oxidizers, nutrients)
On-board fresh water storage	500-gallon
Fresh water transfer rate	50 – 80 gpm
Fresh water inlet	3/4” threaded water supply or 2” camlock
Fresh water filtration	Y strainer, mesh straining element
Bulk powder transfer system	Double diaphragm
Dust suppression system	CleanInject® proprietary, e-type, passive vent
Water supply requirements	≥ 10 gpm (recommended)
Power requirements	70 kva, 460 volts, 3-phase
On-board compressed air supply	7.5-10 hp screw or reciprocating compressor
On-board fresh water wash down	50-80 gpm
Operating environment	All conditions: rain, freezing, wind, snow

Attachment D Underground Injection Control General Discharge Permit

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau
1190 South St. Francis Drive (87505)
P.O. Box 5469, Santa Fe, New Mexico 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.env.nm.gov

BUTCH TONGATE
Cabinet Secretary

BRUCE YURDIN
Acting Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

December 4, 2018

New Mexico Environment Department Petroleum Storage Tank Bureau
Attn: Lorena Goerger
2905 Rodeo Park Drive East, Building 1
Santa Fe NM, 87505

RE: Administrative Completeness Determination and Applicant's Public Notice Requirements, DP-1872, A Market Place

Dear Lorena Goerger,

The New Mexico Environment Department (NMED) received a Groundwater Discharge Permit Application for the above referenced facility on November 1, 2018. Pursuant to Section 20.6.2.3108 NMAC of the New Mexico Ground and Surface Water Protection Regulations (20.6.2 NMAC), NMED determined on November 20, 2018, that your application is administratively complete.

Within 30 days of the date when the US Postal Service first makes notice to you of its possession of this letter, you must provide public notice. Instructions and materials needed to complete the public notice are enclosed.

After NMED receives the completed proof of public notice, a technical reviewer will contact you if additional information is needed to process your application. If you have a deadline of concern in the interim or any questions, please call the Ground Water Quality Bureau at (505) 827-2900.

Sincerely,

for **Michelle Hunter**, Chief
Ground Water Quality Bureau

enc: Instructions for Completing Public Notice Requirements
Affidavit
Public Notice Flyer
Text for Newspaper Display Ad

INSTRUCTIONS FOR COMPLETING PUBLIC NOTICE REQUIREMENTS

Discharge Permit DP-1872 ☒ New ☐ Renewal/Modification ☐ Modification

Within 30 days of the date when the US Postal Service first makes notice to you of its possession of this letter, you must provide public notice as follows:

1. **Post sign(s) at the facility.**
   A sign 2 x 3 feet in size (or multiple signs if required) must be posted **at or near the facility for 30 days** in a conspicuous location approved by NMED. The text for the poster is enclosed. It is the responsibility of the applicant to provide the poster. NMED approves the following sign posting location(s).

   One sign to be posted at the front door of the automobile repair shop located on the site.

2. **Post a public notice flyer off-site.**
   The enclosed public notice flyer which must be posted **off-site** at a location conspicuous to the public and approved by NMED. NMED approves the following flyer posting location:

   One flyer to be placed at the nearest library

3. **Mail a public notice flyer to property owners within 1/3 mile.**
   A copy of the enclosed public notice flyer must be sent by 1st class mail to the owners of record of all properties within 1/3 mile from the boundary of the property where the discharge site is located. If there are no properties within 1/3 mile other than properties owned by the applicant, then the flyer must be mailed to the owners of record of the nearest adjacent properties.

   The names and addresses of property owners can be obtained from the county tax assessor's office. The list of property owners' names and addresses must be submitted to NMED.

4. **Mail a public notice flyer to the owner of the discharge site.**
   A copy of the enclosed flyer must be sent via certified mail, return receipt requested, to the owner(s) of the discharge site(s), if the applicant is not the owner. The list of owners' names and addresses and the certified mail receipts must be submitted to NMED.

5. **Place a display ad in the newspaper.**
   A display ad 3 x 4 inches in size must be published for one day in a newspaper of general circulation in the location of the proposed discharge. The ad may **not** be placed in the classified or legal section. The text for the ad is enclosed. NMED approves publishing the ad in the following newspaper:

   Valencia County News Bulletin

PROOF OF NOTICE. Within 15 days of completing the above requirements, the applicant must submit the following items as proof of notice to NMED:

- ✓ Affidavit regarding the sign posting and mailing (form enclosed).
- ✓ List of names and addresses to whom the public notice flyer was mailed.
- ✓ List of names and addresses of owners of discharge sites.
- ✓ Certified mail receipts for mailing to discharge site owner(s), if required.
- ✓ Copy of newspaper ad.

Send to NMED Ground Water Quality Bureau, PO Box 5469, Santa Fe, NM 87502.

Reviewer's Initials and Date 12/3/13

AFFIDAVIT OF PUBLIC NOTICE COMPLETION

New Permit

DP-*1872*

I certify, under penalty of law, that I have fulfilled the Ground Water Discharge Permit public notice requirements of Section 20.6.2.3108(B) NMAC.

- ✓ I posted a sign for 30 days displaying a synopsis of the public notice in English and in Spanish at or near the proposed facility in a conspicuous public location (or multiple locations) approved by NMED.
- ✓ I posted a public notice flyer at a conspicuous off-site location approved by NMED.
- ✓ I placed a synopsis of the public notice in English and in Spanish in a newspaper approved by NMED. A copy of the newspaper page containing the synopsis is enclosed.
- ✓ I sent the public notice flyer via 1st class mail to *(check box)*:
  - ☐ owners of all properties within a 1/3 mile of the boundary of the property of the proposed discharge locations – mailing list is enclosed.
  - ☐ owners of all adjacent property (if applicant owns all property within 1/3 mile) – mailing list is enclosed.
- ✓ I sent the public notice flyer via certified mail, return receipt requested, to *(check box)*:
  - ☐ owner of the property of the proposed discharge locations (if applicant is not the owner) – mailing address is enclosed.

I am aware that there are significant penalties for false certification including the possibility of fines.

_____ _____

Signature of Applicant *Date*

_____ _____

Printed Name *Title*

NEW MEXICO ENVIRONMENT DEPARTMENT
GROUND WATER QUALITY BUREAU

UNDERGROUND INJECTION CONTROL

GENERAL DISCHARGE PERMIT

Certified Mail- Return Receipt Requested

Facility Name:	**A Market Place FID 26331**
Facility Location:	**1536 E. River Road** **Belen, New Mexico** **Section 16, 5N, 2E** **Valencia County**
Legally Responsible Party:	**New Mexico Environment Department** **Petroleum Storage Tank Bureau (PSTB)** **Remedial Action Program** **Attn: Lorena Goerger, Program Manager,** **2905 Rodeo Park Drive East, Building 1** **Santa Fe NM, 87505** **505-476-4385**
Remediation Oversight Agency Contact:	**NMED Petroleum Storage Tank Bureau** **Lorena Goerger** **505-476-4385**
Remediation or Injection Plan Identification:	**Final Remediation Plan, A Market Place,** **1536 E. River Road, Belen, New Mexico,** **Valencia County**
Permitting Action:	**New**
PPS Contact	**Jason Herman** **Phone Number: 505-827-2713**
EFFECTIVE DATE: October 31,2018	**TERM ENDS: October 21, 2019**

Michelle Hunter
Chief, Ground Water Quality Bureau

[Subsection H of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.I]

I. UIC GENERAL DISCHARGE PERMIT

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) issues this Underground Injection Control General Discharge Permit (UIC Permit) for the subsurface emplacement of additive fluids through a Class V UIC injection well for the purpose of facilitating vadose zone or ground water remediation. The GWQB issues this UIC Permit to New Mexico Environment Department Petroleum Storage Tank Bureau (Permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

In issuing this UIC Permit, the GWQB has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been met. The activities authorized by this UIC Permit are principally governed by **Final Remediation Plan, A Market Place Site, FID 26331** (Injection Plan), under the authority of STATUTES/REGULATIONS, with oversight by the NMED Petroleum Storage Tank Bureau. Compliance with this UIC Permit requires compliance with the terms, requirements, and conditions of the Injection Plan. The term of this UIC Permit shall be no longer than five years from the effective date of this UIC Permit.

The injection activities, the location of the injection site, the type of injection and quantities of additives being used are briefly described as follows:

Injection Activities (summary: including injection well type, number of wells, and injection frequency)

Copy of the Injection Plan Attached (required): ☒ Included as a separate submittal

Injection Site Information

Depth to Ground Water: 4.69 ft
Existing concentration of total dissolved solids (TDS) in ground water: unknown
Location: 1536 E. River Road, Belen, NM
County: Valencia
Latitude: 34° 39'11.00"N
Longitude: 106°44'32.00"W

Map Showing Area of Injection Sites Attached (required) -: ☐

Additives Being Used (including volumes, manufacturer, and mixing ratios)

Please see FRP Attachment B for additives used, volumes, manufacturer, and mixing ratios

Anticipated Precipitation, Dissolution, Adsorption, and Desorption Products

Please see FRP Attachment B

Public Notice Posting Locations

2 inch by 3 inch Newspaper Ad required for New, Renewal, Modification and Renewal/Modification applications.
Newspaper: Albuquerque Journal

2 feet by 3 feet sign posted for 30 days in a location conspicuous to the public at or near the facility required for New, Modification and Renewal/Modification applications.
Sign Location: Sign will be posted by the front door of the Walgreens

8.5 inch by 11 inch or larger posted off-site location conspicuous to the public (e.g. public library). Required for New, Modification and Renewal/Modification applications.
Flyer Location: Sign will be posted at the nearest Library

This UIC Permit consists of the complete and accurate completion of this UIC Permit form as determined by the GWQB.
Issuance of this UIC Permit does not relieve the Permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

Signatures

Signature must be that of the person listed as the legally responsible party on this application.

I, the applicant, attest under penalty of law to the truth of the information and supporting documentation contained in this application for an Underground Injection Control General Discharge Permit.

Applicant's Signature

Signature: _____ Date: _____

Printed Name: _____ Title: _____

II. FINDINGS

In issuing this UIC Permit, GWQB finds:

1. The Permittee is injecting fluids so that such injections will move directly or indirectly into ground water within the meaning of Section 20.6.2.3104 NMAC.
2. The Permittee is injecting fluids so that such fluids will move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.
3. The Permittee is using a Class V UIC well as described in 20.6.2.5002(B)(5)(d)(ii) NMAC for in situ ground water remediation by injecting a fluid that facilitates vadose zone or groundwater remediation.
4. The Permittee is injecting fluids into groundwater in order to achieve the remediation goals identified in the A Market Place Final Remediation Plan.

III. AUTHORIZATION TO DISCHARGE

The Permittee is authorized to inject chemical additives into groundwater in accordance with this UIC Permit and the Injection Plan under the oversight of Groundwater Quality Bureau.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

IV. CONDITIONS

The conditions of this UIC Permit shall be complied with by the Permittee and are enforceable by GWQB.

1. The Permittee shall perform remediation activities in accordance with the Injection Plan and shall notify GWQB of any changes prior to making them.

   [20.6.2.3107 NMAC]

2. The Permittee shall monitor the injection activities and their effects on ground water quality as required by the Injection Plan and shall provide GWQB with electronic copies of the required reporting and any pertinent documentation of activities at the site.

   [20.6.2.3107.A NMAC, 20.6.2.3109.A NMAC]

3. If the GWQB or the Permittee identifies any failure of the Injection Plan or this UIC Permit to comply with 20.6.2 NMAC not specifically noted herein, GWQB may require the Permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure.

   Additionally, the GWQB may require the Permittee to submit a proposed modification to the Injection Plan, this UIC Permit, or both.

   [20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

4. Additional monitoring requirements are provided in Section 3.0 of the A Market Place Final Remediation Plan.

5. TERMINATION – Within 30 days of completion of activities authorized by this UIC Permit the Permittee shall submit a closure report and a request to terminate the UIC Permit to the GWQB for its approval. The closure report shall identify how the injection well(s) was closed in accordance with the Injection Plan. The Permittee shall provide NMED PSTB with a copy of this closure report.

   [20.6.2.5005 NMAC, 19.27.4 NMAC]

6. INSPECTION and ENTRY – The Permittee shall allow a representative of the NMED to inspect the facility and its operations subject to this UIC Permit and the WQCC regulations. The GWQB representative may, upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC.

   The Permittee shall allow the GWQB representative to have access to, and reproduce for their use, any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this UIC Permit and the WQCC regulations.

   Nothing in this UIC Permit shall be construed as limiting in any way the inspection and entry authority of GWQB under the WQA, the WQCC Regulations, or any other local, state or federal regulations.

   [20.6.2.3107.D NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]

7. MODIFICATIONS and/or AMENDMENTS – In the event the Permittee proposes a change to the injection plan that would result in a change in the volume injected; the location of the

injections; or the concentration of the additives being injected by the facility, the Permittee shall notify GWQB prior to implementing such changes. The Permittee shall obtain approval (which may require modification of this UIC Permit) by GWQB prior to implementing such changes.

[20.6.2.3107.C NMAC, 20.6.2.3109.E and G NMAC]

8. COMPLIANCE with OTHER LAWS – Nothing in this UIC Permit shall be construed in any way as relieving the Permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.

   [NMSA 1978, § 74-6-5.L]

9. PERMIT FEES – Payment of permit fees is due at the time of UIC Permit approval. Permit fees shall be paid in a single payment remitted to GWQB no later than 30 days after the UIC Permit effective date.

   Permit fees are associated with issuance of this UIC Permit. Nothing in this UIC Permit shall be construed as relieving the Permittee of the obligation to pay all permit fees assessed by GWQB. A Permittee that ceases injecting or does not commence injecting during the term of the UIC Permit shall pay all permit fees assessed by GWQB. An approved UIC Permit shall be suspended or terminated if the facility fails to remit a payment by its due date.

   [20.6.2.3114.F NMAC, NMSA 1978, § 74-6-5.K]

Attachment E Copies of Notifications and Letters

PUBLIC NOTICE

Receipt of Discharge Permit Application

DP-1872, A Market Place

DP-1872, A Market Place: The New Mexico Environment Department Petroleum Storage Tank Bureau proposes to discharge of up to 2,025 gallons of remediation solution into injection wells. Potential contaminants from this type of discharge include organic compounds, inorganic compounds, and metals. The facility is located at 1536 E. River Road, Belen, Valencia County. Groundwater most likely to be affected is at a depth of approximately 5 feet and had a pre-discharge total dissolved solids concentration of 624 milligrams per liter.

Provided the applicant has met applicable requirements, the New Mexico Environment Department (NMED) will propose a Discharge Permit containing limitations, monitoring requirements, and other conditions intended to protect groundwater quality for present and potential future use. Information in this public notice was provided by the applicant and will be verified by NMED during the permit application review process. NMED will develop a Public Involvement Plan (PIP) to identify all communities potentially affected by the proposed permitted activity and expand public participation opportunities to accommodate the needs of those communities. The PIP will be posted online at https://www.env.nm.gov/gwqb/public-involvement-plans/ and placed at the NMED field office nearest to the proposed permitted activity. NMED will accept comments and statements of interest regarding the application and will create a facility specific mailing list for persons who wish to receive future notices.

Questions, comments, statements of interest, or requests for non-English language assistance should be directed to:
Jason Herman, DP-1872
Ground Water Quality Bureau
PO Box 5469
Santa Fe, NM 87502
(505) 827-2900

Applicant:
Petroleum Storage Tank Bureau
Attn: Lorena Goerger
Program Manager
2905 Rodeo Park Drive East
Building 1
Santa Fe NM, 87505

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Parts 5 and 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non- discrimination programs, policies or procedures, you may contact: Kristine Pintado, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@state.nm.us. If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination. Telephone conversation assistance is available through Relay New Mexico at no charge for people who are deaf, hard of hearing, or have difficulty speaking on the phone, by calling 1-800-659-1779; TTY users: 1-800-659-8331; Spanish: 1-800-327-1857.

AVISO PÚBLICO

Recibo de la Aplicación del Permiso de Descarga

DP-1872, A Market Place

DP-1872, A Market Place: La Oficina de Tanques de Almacenamiento de Petróleo del Departamento de Medio Ambiente de Nuevo México propone descargar hasta 2.025 galones por día de solución de remediación a pozos de inyección. Los posibles contaminantes asociados con este tipo de descarga incluyen compuestos orgánicos, compuestos inorgánicos, y metales. La instalación está ubicada en 1536 E. River Road, Belen, condado de Valencia. El agua subterránea que tiene más probabilidad de verse afectada se encuentra a una profundidad aproximada de 5 pies y tenía una concentración de sólidos disueltos totales antes del vertido de 624 miligramos por litro.

Siempre que el solicitante cumpla con los requisitos aplicables, el Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés) propondrá para su aprobación un Permiso de Descarga que contiene limitaciones, requisitos de monitoreo, y otras condiciones destinadas a proteger la calidad del agua subterránea para su uso actual y potencial uso en el futuro. La información en esta notificación pública fue provista por los solicitantes y será verificada por NMED durante el proceso de revisión de solicitudes de permiso. NMED desarrollará un Plan de Participación Pública (PIP) para identificar a todas las comunidades potencialmente afectadas por la actividad permitida propuesta y ampliar las oportunidades de participación pública para acomodar las necesidades de esas comunidades. El PIP será publicado en línea en https://www.env.nm.gov/gwqb/public-involvement-plans/ y se colocará en la oficina de campo de NMED más cercana a la actividad autorizada propuesta. El NMED aceptará comentarios y declaraciones de interés con respecto a las solicitudes y creará listas de correo específicas de las instalaciones para las personas que deseen recibir avisos en el futuro.

Todas las preguntas, comentarios, declaraciones de interés o solicitudes de asistencia en otro idioma deben dirigirse a:
Jason Herman, DP-1872
La Oficina de Calidad de Aguas Subterráneas
PO Box 5469
Santa Fe, NM 87502
(505) 827-2900

Solicitante:
Petroleum Storage Tank Bureau
Attn: Lorena Goerger
Program Manager
2905 Rodeo Park Drive East
Building 1
Santa Fe NM, 87505

NMED no discrimina por motivos de raza, color, origen nacional, discapacidad, edad o sexo en la administración de sus programas o actividades, según lo exigido por las leyes y los reglamentos correspondientes. NMED es responsable de la coordinación de los esfuerzos de cumplimiento y la recepción de indagaciones relativas a los requisitos de no discriminación implementados por 40 C.F.R. Partes 5 y 7, incluido el Título VI de la Ley de Derechos Civiles de 1964, según enmendada; Sección 504 de la Ley de Rehabilitación de 1973; la Ley de Discriminación por Edad de 1975, Título IX de las Enmiendas de Educación de 1972 y la Sección 13 de las Enmiendas a la Ley Federal de Control de Contaminación del Agua de 1972. Si usted tiene preguntas sobre este aviso o sobre cualquier programa, política o procedimiento de no discriminación de NMED, usted puede comunicarse con la Coordinadora de No Discriminación: Kristine Pintado, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@state.nm.us. Si usted piensa que ha sido discriminado/a con respecto a un programa o actividad de NMED, usted puede comunicarse con la Coordinadora de No Discriminación antes indicada o visitar nuestro sitio web en https://www.env.nm.gov/non-employee-discrimination-complaint-page/ para aprender cómo y dónde presentar una queja de discriminación. Hay disponible asistencia telefónica de conversación sin costo alguno a través de Relay New Mexico para personas sordas, con dificultades auditivas o que tengan dificultad para hablar por teléfono, llamando al 1-800-659-1779; usuarios de TTY: 1-800-659-8331; español: 1-800-327-1857.

Public Notice Synopsis, DP-1872
(for poster and newspaper display ad)

Newspaper display ad must be at least 3 inches by 4 inches in size and must be published for at least one day in a section other than the classifieds or legals.

Poster must be made to be at least 2 feet by 3 feet in size and must be posted at or near the facility, in a location approved by the department, and conspicuous to the public for a period of 30 days. For more than 640 contiguous acres of a discharge site, or when the discharge site is not located on contiguous properties, additional posters may be required.

PUBLIC NOTICE **DISCHARGE PERMIT APPLICATION**	**AVISO PÚBLICO** **APLICACIÓN PARA PERMISO DE DESCARGA**
NMED Petroleum Storage Tank Bureau proposes to discharge up to 2,025 gallons per day of remediation solution into multiple injection-wells. Discharge location: 1536 E. River Road, Belen. For additional information, contact the New Mexico Environment Department and reference: DP-1872 PN1.	NMED La Oficina de Tanques de Almacenamiento de Petróleo propone descargar hasta 2.025 galones por día por día de remediación a pozos de inyección. Sitio de descarga: 1536 E. River Road, Belen. Para información adicional comuníquese con el Departamento de Medio Ambiente de Nuevo México y ponga la referencia: DP-1872 PN1.

(505) 827-2900 www.env.nm.gov/gwqb/public-notice

NOTICE OF PLANNED SUBMISSION OF
FINAL REMEDIATION PLAN

Date of Notice: January 10, 2019

Notice is hereby given by the Petroleum Storage Tank Bureau (PSTB) of the New Mexico Environment Department (NMED) of the planned submission of a Final Remediation Plan (Plan) on January 10, 2019, as follows:

1. The Plan proposes actions to remediate a release of petroleum or petroleum products into the environment.

2. The release occurred at the A Market Place site located at 1536 E. River Road, Belen, New Mexico.

3. The Plan proposes to remediate gasoline contamination in groundwater using carbon-based injection technology on the release property.

4. A copy of the Plan and all data related to the Remediation Plan can be viewed by interested parties at (1) the NMED PSTB main office located at 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico 87505, (2) PSTB's field office located at 121 Tijeras NE, Suite 1000, Albuquerque, NM 87102, and (3) the following website: https://cloud.env.nm.gov/waste/?c=2418&k=6bbd3cec74

5. Comments on the Plan must be provided to the NMED through the PSTB Project Manager by February 8, 2019. Comments may be delivered, mailed, or emailed to:

   Jack Dickey
   Project Manager
   New Mexico Environment Department
   Petroleum Storage Tank Bureau
   121 Tijeras NE, Suite 1000
   Albuquerque, New Mexico 87102
   jack.dickey@state.nm.us

AVISO DE PRESENTACIÓN PLANIFICADA DEL
PLAN DE REMEDIACION FINAL

Fecha del Aviso: 10 de enero de 2019

En este documento, la Oficina de Tanques de Almacenamiento de Petróleo (PSTB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés) da aviso de la presentación planificada de un Plan de Remediación Final (Plan) el 10 de enero de 2019, de la siguiente manera:

1. El Plan propone acciones para remediar la fuga de petróleo o de productos derivados del petróleo en el medio ambiente.

2. La fuga ocurrió en A Market Place ubicado en 1536 E. River Road, Belén, Nuevo México.

3. El Plan propone remediar la contaminación por gasolina de las aguas subterráneas, utilizando tecnología de inyección basada en carbono, en la propiedad donde se produjo la fuga.

4. Las partes interesadas pueden ver una copia del Plan y todos los datos relacionados con el Plan de Remediación en (1) la oficina principal de PSTB NMED ubicada en 2905 Rodeo Park Drive East, Edificio 1, Santa Fe, NM 87505, (2) La oficina de campo de PSTB ubicada en 121 Tijeras NE, Suite 1000, Albuquerque, NM 87102 y (3) el siguiente sitio web: https://cloud.env.nm.gov/waste/?c=2418&k=6bbd3cec74.

5. Los comentarios sobre el Plan deben enviarse a NMED a través del Gerente del Proyecto de PSTB hasta el 8 de febrero de 2019. Los comentarios pueden entregarse o enviarse por correo postal o por correo electrónico a:

   Jack Dickey
   Project Manager
   New Mexico Environment Department
   Petroleum Storage Tank Bureau
   121 Tijeras NE, Suite 1000
   Albuquerque, New Mexico 87102
   jack.dickey@state.nm.us

Attachment F Health and Safety Plan

HAZWOPER
Health and Safety Plan

A Market Place

A Market Place

1536 E. River Road
NMED PSTB Facility ID No. 26331

Belen, New Mexico Valencia County

Prepared for	Prepared by
NMED Petroleum Storage Tank Bureau	AECOM
121 Tijeras Avenue NE, Suite 1000	6501 America's Parkway
Albuquerque, NM 87102	Albuquerque NM 87110

Expiration Date (Max 1-Year from signature date)
October 26, 2019

Preparer Dale Flores, PMP PG SHE&E Representative	Dale J. Flores	10/25/2018
Area/Regional SHEM Patrick Ostrye	Patrick W. Ostrye	10/25/2018
Project Manager Eddie Hubbert	Edward C. Hubbert	10/25/2018

HASP Summary

Note: This Summary is intended to provide key information only and cannot be substituted for reading, understanding, and complying with the full HASP. This summary may be continually updated as tasks and personnel change. Use Continuation Sheets if necessary.

Project Name:	A Market Place	**Project Number:**	60581896
Summary Revision Date:		**Client Name:**	NMED PSTB

Report ALL SH&E Incidents, no matter how minor, to the Incident Hotline: 800-348-5046
Injury, Property Damage, Vehicle, Security, Regulatory Inspection, Environmental Impact, and any potentially work related injury, discomfort/ pain, or damage.

Identify the nearest Occupational Clinic and Hospital to the site that accepts AECOM Workers Compensation Insurance (see **Attachment A** for instructions). If the nearest such clinic or hospital is an unreasonable distance from the site, identify nearer hospitals or clinics. Attach maps and directions to the clinics and hospitals in **Attachment A**.

Occupational Clinic:	Concentra Medical Clinic	**Nearest Hospital:**	Presbyterian Kaseman Hospital
Address:	3101 Menaul Blvd NE Suite B Albuquerque, NM 87107	**Address:**	8300 Constitution Ave NE Albuquerque, NM 87110
Phone Number:	1-505-842-5676	**Phone Number:**	1-505-291-2000

Key Personnel

Project Manager (PM):	Dale Flores	**Cell Phone:**	1-505-259-7823
Site Supervisor (SS)	Eddie Hubbert	**Cell Phone**	1-505-401-5323
Safety Officer (SSO):	Eddie Hubert	**Cell Phone**	1-505-401-5323
AECOM SH&E Mgr.	Tim Joseph	**Cell Phone:**	1-303-884-2548
Client PM:	Jack Dickey	**Cell Phone:**	(505) 222-9563

List ALL Short-Service Employees, including subcontractors (<6 Months with Company in Current Area/Job Description):

NONE

List ALL Subcontractors and their Site Safety Officers:
To be determined before field work starts

PM must positively verify subcontractors are approved in Subport for the work described. If there were any limitations/ conditions of approval, describe them and how they are being met.

☒ I have verified that all subcontractors are approved in Subport, and that all conditions of approval are met.

Eddie Hubbert		10/25/2018
Project Manager Name	**Project Manager Signature**	**Date**

Table of Contents

Attachments

Attachment A. Hospital/Clinic Maps and Incident Reporting and Response Flow Chart

Attachment B. AECOM SH&E Procedures

Attachment C. Stretch/Flex Poster

Attachment D. Safety Data Sheets

Attachment E. Site Orientation

Attachment F. Project/Task-Specific Pre-Job Hazard Assessments Forms

Applicable References

This Health and Safety Plan (HASP) conforms to the regulatory requirements and guidelines established in the following documents:

- Title 29, Part 1910 of the Code of Federal Regulations (29 CFR 1910), Occupational Safety and Health Standards (with special attention to Section 120, Hazardous Waste Operations and Emergency Response).
- Title 8 of the California Code of Regulations (8 CCR), with special attention to Section 5192 Hazardous Waste Operations and Emergency Response, and Section 3202, Injury Illness Prevention Program.
- 29 CFR 1926, Safety and Health Regulations for Construction.
- 8 CCR, with special attention to Sub Chapter 4, Sections 1500 - 1938 Construction Safety Orders.
- National Institute for Occupational Safety and Health/Occupational Safety and Hazards Administration/U.S. Coast Guard/U.S. Environmental Protection Agency, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, Publication No. 85-115, 1985.
- The requirements in this HASP also conform to AECOM's Safety for Life Program requirements as specified in the AECOM Safety, Health and Environment (SH&E) Manual.
- A Market Place, Final Remediation Work Plan (October 2018)

Template Revision Log

Version	Revised By	Date	Summary of Revisions
1.0	Kris Brobst	October 2016	Initial Version
1.1	Patrick Walz	January 2017	Updated Procedure IDs from NA to AM. Updated QR codes for Lifeguard and IndustrySafe.
1.2	Brobst, Walz, Cristopher Altman & Maria Mirabelli	January 2018	1. Technical edits, spelling corrections, & formatting changes throughout document 2. Standardized terminology for Job Safety Analysis/Pre-Job-Hazard Analysis (JSA/Pre-JHA) throughout document. 3. Updated Header to include AECOM Logo and client name throughout document 4. Page v: Added Revision log 5. Page 3: Updated AECOM SH&E Policy statement to 2017 version 6. Page 6: Added *Section 3.5.2: Protective Health* 7. Page 7: Added *Section 3.6: Rewards and Recognition* 8. Page 11: Updated Roles & Responsibilities reference to procedure S3AM-117-PR1 9. Page 14: Added discussion of stretching & flexing to Section 5.2 and reference to new Attachment C, a stretch-flex poster. 10. Page 14: To Site-Specific Training requirements table, added training option for Field Safety where Hazwoper training is not required. Added option for Speak-up/Listen Up for Environmental Business Line field workers and supervisors. 11. Page 16: Inserted Risk Planning Elements figure 12. Page 16: Updated Hazard Categories section with new hazard categories and hazard wheel. 13. Page 17: Updated 4-Sight section with new logo 14. Page 17: Added *Section 6.5: Speak Up/Listen Up* 15. Page 20: Deleted “Maximum Concentrations found on site” column. Added note in introduction that the chemicals listed on the table are suspected to be present at the site. 16. Page 30: Updated hyperlink to Operational Security Plan template GRG-001-RP4 17. Attachment C: New Stretch/Flex poster. Revised subsequent attachment numbers.

1. Introduction

This written HASP is designed to identify, evaluate, and control safety and health hazards, and to outline emergency response actions for AECOM-managed activities. This HASP must be kept on site during wok activities and made available to all workers including subcontractors and other site occupants for informational purposes. AECOM subcontractors are expected to independently characterize, assess, and control site hazards created by their specific scope of work.

This section of the HASP summarizes important AECOM SH&E Procedures that apply to all Design and Consulting Services (DCS) Americas jobs. See **Attachment B** for complete copies of applicable field SH&E Procedures. This template has been designed primarily for use in the United States; see procedure attachment S3AM-320-ATT2 for Canadian Specific Requirements on AECOM's ecosystem.

1.1 Applicable References

This Health and Safety Plan (HASP) conforms to the regulatory requirements and guidelines established in the following documents:

- Title 29, Part 1910 of the Code of Federal Regulations (29 CFR 1910), Occupational Safety and Health Standards (with special attention to Section 120, Hazardous Waste Operations and Emergency Response).
- Title 8 of the California Code of Regulations (8 CCR), with special attention to Section 5192 Hazardous Waste Operations and Emergency Response, and Section 3202, Injury Illness Prevention Program.
- 29 CFR 1926, Safety and Health Regulations for Construction.
- 8 CCR, with special attention to Sub Chapter 4, Sections 1500 - 1938 Construction Safety Orders.
- National Institute for Occupational Safety and Health/Occupational Safety and Hazards Administration/U.S. Coast Guard/U.S. Environmental Protection Agency, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, Publication No. 85-115, 1985.
- The requirements in this HASP also conform to AECOM's Safety for Life Program requirements as specified in the AECOM Safety, Health and Environment (SH&E) Manual.
- A Market Place, Final Remediation Work Plan (October 2018)

Project Assumptions

- This site is an AECOM-controlled site.
- Site management will assist in locating subsurface utilities, vessels, and structures located on the property and outside the scope of the utility locator service.
- No confined spaces will be entered on this project.
- No excavations will be entered.
- Work will be performed during daylight hours.
- [List additional Assumptions made while preparing HASP, such as work hours]

2. Site Information and Scope of Work

2.1 Site Description

A Market Place site (Site) is located at 1536 E. River Road in Belen, New Mexico. The Site is currently occupied by an auto repair/tire retailer, an abandoned structure to the west, a privet residence to the north, and adjacent to a veterinary clinic to the south, Valencia Animal Clinic. The privet residence and the Site share a gravel access to the west of the Site. There are currently five active monitor wells (MW-2, MW-3, MW-4, MW-6, and MW-7). Monitor wells MW-1 and MW-5 were abandoned in 2009. The depth to water ranges from 4.0 to 5.0 feet below ground surface.

2.2 Site Background/History

Groundwater monitoring at the Site was initiated as the result of a confirmed release in 1996. Since then, groundwater monitoring has been conducted infrequently, until quarterly monitoring resumed in February 2015. Previous investigations and groundwater monitoring have determined that a dissolved-phase petroleum plume is present beneath the Site in the immediate vicinity of MW-3 and MW-4. Free phase hydrocarbon was detected, as a heavy sheen in samples from MW-3 between July 2007 and March 2010. The sheen has not been observed since March 2010. The dissolved phase plume is defined to the east by MW-2 and to the south by monitoring wells MW-6 and MW-7. There is currently no delineation to the north or west up-gradient of the former tank pit. The constituents of concern in the dissolved-phase plume consists of benzene, toluene, ethylbenzene and xylenes (BTEX) and naphthalene.

In April 2018, the benzene concentration of 64 micrograms per liter (µg/L) from monitoring well MW-3 and 35 µg/L at MW-4 exceeded the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards for benzene (10 µg/L). No other monitoring wells had petroleum constituents exceeding NMWQCC groundwater standards at the Site. Since, at least, 2006 dissolved benzene concentrations from monitoring wells MW-3 and MW-4 have consistently exceeded the NMWQCC groundwater standard. No other monitoring wells had petroleum constituent concentrations above NMWQCC groundwater standards

2.3 Client or Third-Party Operations at Site

The Site is currently occupied by an auto repair/tire retailer and adjacent to a veterinary clinic to the south, Valencia Animal Clinic.

2.4 Scope of Work

This scope of work associated includes the following activities:

- Geoprobe 7000 series track mounted direct push technologies (DPT)
  - 27 injection points spaced on offset/staggered 5 ft. centers
  - 680 square feet treatment area
  - BOS 200® injectate at approximately 20 gallons per minute
  - 5 depth intervals between 14 feet (ft) below ground surface (bgs) to 4 ft. bgs.
- Well redevelopment after BOS 200® injection
- Groundwater sampling prior to BOS 200® injection and 60 days after BOS 200® injection
- Possible asphalt and concrete borehole patch repair

2.5 Scope of Work Risk Assessment

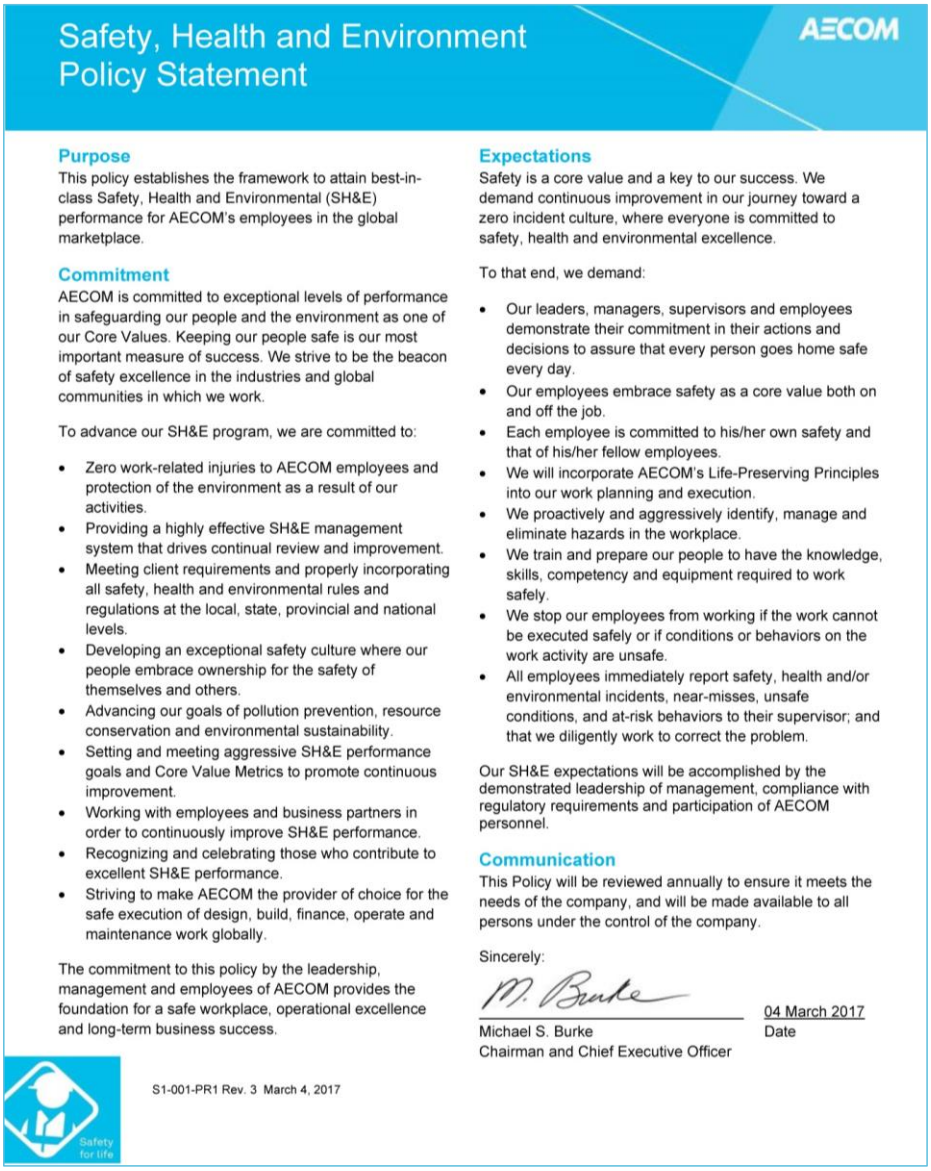
- ☐ **Low Risk** *(examples: non-intrusive work, occasional exposure and/or low risk hazards)*
- ☒ **Medium Risk** *(examples: intrusive work, heavy equipment use, frequent exposure and/or moderate hazards)*
- ☐ **High Risk** *(examples: complicated scope, large/ multiple work crews, and/or constant exposure to hazards).*

The following tasks/ hazards automatically trigger high risk ranking. Check all which apply. Include hazard mitigation procedures later in the appropriate Physical, Chemical, or Environmental section of the HASP.

- ☐ Asbestos Removal / Contact
- ☐ ATV Use
- ☐ Bridge / Dam Inspections/ Snooper Truck Use
- ☐ Confined Space
- ☐ Cranes and Rigging Use
- ☐ Demolition
- ☐ Diving – Scientific or Commercial
- ☐ High Speed Traffic Exposure
- ☐ Hot Work
- ☐ Conditions Immediately Dangerous to Life or Health (IDLH)
- ☐ Laboratory Operations
- ☐ LOTO or Live Energy Source Work
- ☐ On-rail / Near Rail Work
- ☐ Ordinance, Munitions, Explosives Use
- ☐ Pile Driving
- ☐ Radiation or Radioactive Instrument Use
- ☐ Remote Location or Lone Worker
- ☐ Respirator Use (does not include dust mask)
- ☐ Scaffolding Use
- ☐ Use or Exposure to Toxic Chemicals
- ☐ Trenching / Excavation
- ☐ Tunnel / Underground Work
- ☐ UXO / MMR
- ☐ Work at Heights >4 ft.
- ☐ Work at Angle >30 deg.
- ☐ Work On / Over Water

3. AECOM Safety Health and Environment Program

3.1 AECOM Policy



Safety, Health and Environment Policy Statement

AECOM

Purpose

This policy establishes the framework to attain best-in-class Safety, Health and Environmental (SH&E) performance for AECOM's employees in the global marketplace.

Commitment

AECOM is committed to exceptional levels of performance in safeguarding our people and the environment as one of our Core Values. Keeping our people safe is our most important measure of success. We strive to be the beacon of safety excellence in the industries and global communities in which we work.

To advance our SH&E program, we are committed to:

- Zero work-related injuries to AECOM employees and protection of the environment as a result of our activities.
- Providing a highly effective SH&E management system that drives continual review and improvement.
- Meeting client requirements and properly incorporating all safety, health and environmental rules and regulations at the local, state, provincial and national levels.
- Developing an exceptional safety culture where our people embrace ownership for the safety of themselves and others.
- Advancing our goals of pollution prevention, resource conservation and environmental sustainability.
- Setting and meeting aggressive SH&E performance goals and Core Value Metrics to promote continuous improvement.
- Working with employees and business partners in order to continuously improve SH&E performance.
- Recognizing and celebrating those who contribute to excellent SH&E performance.
- Striving to make AECOM the provider of choice for the safe execution of design, build, finance, operate and maintenance work globally.

The commitment to this policy by the leadership, management and employees of AECOM provides the foundation for a safe workplace, operational excellence and long-term business success.

Expectations

Safety is a core value and a key to our success. We demand continuous improvement in our journey toward a zero incident culture, where everyone is committed to safety, health and environmental excellence.

To that end, we demand:

- Our leaders, managers, supervisors and employees demonstrate their commitment in their actions and decisions to assure that every person goes home safe every day.
- Our employees embrace safety as a core value both on and off the job.
- Each employee is committed to his/her own safety and that of his/her fellow employees.
- We will incorporate AECOM's Life-Preserving Principles into our work planning and execution.
- We proactively and aggressively identify, manage and eliminate hazards in the workplace.
- We train and prepare our people to have the knowledge, skills, competency and equipment required to work safely.
- We stop our employees from working if the work cannot be executed safely or if conditions or behaviors on the work activity are unsafe.
- All employees immediately report safety, health and/or environmental incidents, near-misses, unsafe conditions, and at-risk behaviors to their supervisor; and that we diligently work to correct the problem.

Our SH&E expectations will be accomplished by the demonstrated leadership of management, compliance with regulatory requirements and participation of AECOM personnel.

Communication

This Policy will be reviewed annually to ensure it meets the needs of the company, and will be made available to all persons under the control of the company.

Sincerely:

M. Burke

04 March 2017

Michael S. Burke
Chairman and Chief Executive Officer

Date

Safety for life

S1-001-PR1 Rev. 3 March 4, 2017

3.2 Safety For Life

"Safety for Life" is a comprehensive integrated AECOM Safety Management System that drives our nearly 100,000 employees toward AECOM's commitment to achieving zero work-related injuries and/or illnesses; preventing damage to property and the environment; and maintaining an environmentally friendly and sustainable workplace. Our Safety for Life program is supported by nine Life Preserving Principles that apply to all AECOM activities.

3.3 Life Preserving Principles

Demonstrated Management Commitment
Our Executive, senior and project managers will lead the SH&E improvement process and continuously demonstrate support and commitment.

Employee Participation
Our employees will be encouraged and empowered to become actively engaged in our safety processes through their active participation in safety committees, training, audits, observations and inspections. Employees will be encouraged to participate in health initiatives and adopt a healthy lifestyle.

Budgeting and Staffing for Safety
Our safety staff will be competent, fully trained and qualified to provide technical resources to our internal and external clients. A budget to support safety activities will be included in project proposals.

Pre-Planning
Our design, engineering, project and construction management staff will deploy effective risk mitigation efforts to design, plan and build safety into every project. Pre-Project and Pre-Task planning will be an effective tool in protecting our employees and the environment.

Contractor Management
Our project staff will work closely with our sub-consultants, subcontractors, contractors and Joint Venture Partners to provide a safe work environment for employees and members of the public. Our goal of SH&E performance excellence will be equally shared by all project participants.

Recognition and Rewards
Our employees will be recognized for their efforts in working safely and their support of our safety efforts.

Safety Orientation and Training
Our employees will be provided with effective safety training in order to identify and mitigate hazards in the workplace to prevent injuries to themselves and others who may be affected by their actions.

Incident Investigation
Our managers and safety professionals will investigate all recordable incidents and serious near misses to identify contributing factors and root causes in order to prevent a reoccurrence. Lessons learned shall be identified, communicated and implemented.

Fit for Duty
Our employees are responsible to report to work each day fit for duty and not to pose a health and safety hazard to themselves or others.

3.4 Driving and Vehicle Safety

The proper operation of vehicles is critical to protecting the safety of AECOM employees and subcontractors. Drivers face numerous hazards while operating vehicles. Some of the hazards include collision with another vehicle, collision with a fixed object, vehicle break down or failure, or falling asleep or becoming otherwise incapacitated while driving. All employees will adhere to Driving procedure S3AM-005-PR, which includes the following key practices:

1. **Authorized Drivers**
   Managers must authorize drivers following evaluation of driver criteria to drive and maintain an AECOM-owned, leased or rented vehicle, a client or customer-owned vehicle, or a personal vehicle operated in the course of conducting AECOM business.

2. **Electronic Devices Prohibited**
AECOM prohibits use of all portable electronic devices while operating a motor vehicle/ equipment which includes being stopped at a traffic light or stop sign. This includes cell phones, two-way radios and other items whether hand-held or hands-free. Electronic devices include, but are not limited to, all mobile phones, pagers, iPods, MP3s, GPS, DVD players, tablets laptops and other portable electronic devices that can cause driver distraction. Hands-free device use is not allowed.

   - GPS units and devices used for navigation may only be used if factory installed or secured to the vehicle with a bracket that allows the driver to view the image without having to take their eyes off the road. Electronic devices shall be setup for operation prior to commencing driving activities and shall not be changed by the driver while driving.

3. **Vehicle Inspections**
The driver shall conduct pre-trip vehicle inspections prior to each trip. A vehicle inspection checklist, S3AM-005_FM2, can be used to guide and document the inspection process. Vehicle inspection is to include a 360-degree walk around and visual inspection under the vehicle for leaks and obstructions prior to moving the vehicle.

4. **Training**
All drivers shall complete defensive driver training. Additional training (i.e., hands-on defensive driver training) may apply for medium and high-risk drivers; see Driving procedure S3AM-005-PR and SHE Training procedure S3AM-003-PR for more details.

5. **Journey Management Plan**
Drivers who undertake trips in excess of 250 miles (400 kilometers) one way, drive in remote or hazardous areas, or when otherwise deemed necessary, shall develop and document a Journey Management Plan using S3AM-005-FM1 or equivalent.

6. **Secure Loads**
Cargo is only to be carried within the passenger compartment of a vehicle when segregated and restrained to prevent objects from becoming distractions, obstructions or projectiles to occupants should emergency vehicle maneuvers be required (e.g., harsh braking or crash). All goods transported on flatbed trucks or in pickup beds must be securely fastened to prevent them from becoming hazards. All applicable laws and regulations regarding securing of loads must be met. It is prudent to check the load after a few miles to ensure that load has not shifted or loosened prior to completing the remainder of the trip.

7. **Backing Up**
Reversing the vehicle is to be avoided if at all possible. If backing up is necessary, use the following guidelines:

   - Pre-plan all vehicle movements.
   - If the pull-through method of parking is not possible, drivers will scan parking spot/area for hazards and back in; thereby, facilitating departure where the first move is forward.
   - A light tap of the horn should be used to alert others of your intention to back up.
   - Avoid tight spaces.
   - Vehicles over 10,000 pounds gross vehicular weight are required to have a competent spotter in place when backing. A competent spotter is one that has received spotter training.
   - All vehicles shall have a competent spotter in place when backing in an active work zone. Parking and public access areas are recommended but not required to have a spotter.

3.5 Fitness for Duty

One of AECOM's nine Life-Preserving Principles is Fitness for Duty (see Fitness for Duty procedure S3AM-008-PR). Fitness for Duty means that individuals are in a state (physical, mental, and emotional) that enables them to perform assignments competently and in a manner that does not threaten the health and safety of themselves or others. On certain projects or for specific tasks, fit for duty certifications may be requested of medical providers by SH&E Managers or Human Resources (HR). Employees should report to work fit for duty and unimpaired by substances or fatigue. Supervisors must observe their employees and work with the employee, SH&E staff, and HR to address deficiencies. AECOM will not tolerate retaliation against any employee for filing a complaint or concern regarding their fitness for duty or participating in any way in an investigation.

3.5.1 Medical Surveillance

AECOM's S3AM-128-PR, Medical Screening and Surveillance, details the requirements to participate in a medical monitoring program. Medical Surveillance provides a streamlined process to determine if employees meet the physical requirements to perform assigned duties as defined by applicable regulations. It is also designed to provide a means to collect data relevant to exposure to chemical and physical agents for the protection of the workers and to confirm the effectiveness of health and safety programs.

3.5.2 Proactive Health

AECOM is committed to promoting proactive health activities in addition to the planning for prevention of safety and environmental incidents. Proactive health activities will be completed on an on-going basis at AECOM on a corporate-wide basis (i.e. Wellness program associated with employee benefits), at offices, and at this project site. Management will be actively involved in providing and encouraging opportunities for health and wellness education and improvement. Health initiatives and education will be discussed periodically during office based meetings as the safety moment or during the daily tailgate meeting as a toolbox talk. Topics may be related to, but are not limited to:

- Heart health;
- Stress management;
- Smoking cessation;
- Diabetes prevention;
- Diet; and
- Exercise benefits.

Topics and educational materials can be located on the AECOM Wellness page, National Institutes of Health website, Centers for Disease Control and Prevention website and other reputable sources online.

In addition, the field team will be encouraged to participate in a daily stretch and flex routine (a standardized way to avoid soft tissue damage from work activities) to the best of their abilities, given their own personal limits. It is particularly beneficial to warm and loosen muscles before repetitive work, manual handling of loads, and when working in cold temperatures or with static postures. The Stretch and Flex manual and poster (Attachment C) serve as guidance for the leader to follow.

3.5.3 Fatigue

One aspect of fit for duty is fatigue management. AECOM has developed procedures that limit work periods or requires additional rest under certain circumstances, including during long-distance travel or when working at high altitudes. These procedures also set limits on extended work periods of 14 hours per day or 60 hours per week. A fatigue management plan is required if longer working hours are necessary (see Fatigue Management Procedure S3AM-009-PR).

3.5.4 Substance Abuse

Drug and alcohol abuse pose a serious threat to the health and safety of employees, clients, and the general public as well as the security of our job sites, equipment and facilities. AECOM is committed to the elimination of illegal drug use and alcohol abuse in its workplace and regards any misuse of drugs or alcohol by employees to be unacceptable. AECOM Substance Abuse Prevention Procedure (S3AM-019-PR) prohibits the use, possession, presence in the body, manufacture, concealment,

transportation, promotion or sale of the following items or substances on company premises. Company premises refer to all property, offices, facilities, land, buildings, structures, fixtures, installations, aircraft, automobiles, vessels, trucks and all other vehicles and equipment - whether owned, leased, or used.

- Illegal drugs (or their metabolites), designer and synthetic drugs, mood or mind altering substances, and drug use related paraphernalia unless authorized for administering currently prescribed medication;
- Controlled substances that are not used in accordance with physician instructions or non-prescribed controlled substances; and
- Alcoholic beverages while at work or while on any customer- or AECOM-controlled property.

This policy does not prohibit lawful use and possession of current medication prescribed in the employees name or over-the-counter medications. Employees must consult with their health care provider about any prescribed medication's effect on their ability to perform work safely and disclose any restrictions to their supervisor.

Although some states may pass laws legalizing medical or recreational marijuana use, the use, sale, distribution and possession of marijuana are violations of federal law and AECOM policy, and will subject an employee to disciplinary action up to and including termination in accordance with controlling law.

3.6 Rewards and Recognition

One of AECOM's Life Preserving Principles is Recognition and Rewards for proactive safety, health and environmentally focused behaviors. All projects are expected to participate in the rewards and recognition programs available on the Corporate and DCS Americas SH&E ecosystem pages. Large, long term projects are encouraged to establish a project specific rewards and recognition program which incorporates project specific goals and activities (template available S3AM-020-FM1). ***All rewards and recognition programs must emphasize the 9 Life Preserving Principles and proactive SH&E activities NOT solely the achievement of lagging metrics ("injury/incident-free" hours, etc.) as those may discourage incident reporting.***

There are several possible appropriate methods of rewarding and recognizing employees and contractors:

1. **Informal** – recognition via verbal acknowledgment, email, spot awards, luncheons, etc.
2. **Formal** – Safety Star Award nomination (link)
3. **Formal** – SH&E Challenge Coins (see local SH&E manager for details)

3.7 Hand Safety

The hands are exposed to hazards more than any body part. SH&E Hand Safety Procedure S3AM-317-PR describes requirements and best practices including these notable practices:

- **All personnel shall have gloves in their immediate possession 100%** of the time when in a shop or on a work site. Gloves that address the hazard shall be worn when employees work with or near any materials or equipment that present the potential for hand injury due to sharp edges, corrosives, flammable and irritating materials, extreme temperatures, splinters, etc. Use the Gloves Needs Assessment (S3AM-317-FM1) to help determine the appropriate glove for the hazard(s).
- **Fixed open-blade knives are prohibited** from use during the course of AECOM work. Examples of fixed open-blade knives include pocket knives, multi-tools, hunting knives, and standard utility knives. For more information about cutting tools, see S3AM-317-ATT1 Safe Alternative Tools.

3.8 Hazard Communication

Hazardous materials that may be encountered on-site as existing environmental or physical/health contaminants are addressed in this HASP. Their properties, hazards, and associated required controls will be communicated to all affected staff and subcontractors in accordance with the requirements of AECOM Procedure S3AM-115-PR1 Hazardous Materials Communication including these key elements:

- All personnel shall be briefed on the hazards of any chemical product they use and shall be aware of and have access to the Safety Data Sheets (SDS).
- All containers on site shall be properly labeled to indicate their contents. Labeling on any containers not intended for single-day, individual use shall contain additional information indicating potential health and safety hazards (flammability, reactivity, etc.).

In addition, any employee or organization (contractor or subcontractor) intending to bring any hazardous material onto this AECOM-controlled work site must first provide a copy of the item's SDS to the Site Supervisor or Site Safety Officer for review and filing. The Site Supervisor or Site Safety Officer will maintain copies of all SDS on site and in **Attachment D**. SDS may not be available for locally obtained products, in which case an alternate form of product hazard documentation will be acceptable.

3.9 Hazardous Material handling and Waste Management

If hazardous, solid, and/or municipal wastes are generated during any phase of the project, the waste shall be accumulated, labeled, and disposed of in accordance with applicable Federal, State, Provincial, Territorial and/or local regulations and SH&E Procedure S3AM-116-PR Hazardous Materials Shipping. A site-specific Entity Letter may be required for the site/client; if so, only persons named on the entity letter are allowed to sign waste shipping papers "***on behalf of [client name]***". Any individual signing shipping papers must have valid Department of Transportation and Resource Conservation and Recovery Act training for waste shipment. Consult the HZM/HZW & TDG page on ecosystem or the SH&E Manager for further guidance on AECOM and regulatory procedures and training requirements.

3.10 Housekeeping and Personal Hygiene

Basic housekeeping requirements for offices and work sites, as well as personal hygiene and sanitation standards can be found in S3AM-013-PR Housekeeping. Inspections should be performed at the regular interval specified below. The housekeeping inspection form S3AM-013-FM1 is available for use.

Complete the table below regarding site-specific Housekeeping and Personal Hygiene requirements:

Housekeeping:	*Inspection Frequency:*	Daily	*Inspector:*	SS/ SSO or designee
Eating, Drinking, Smoking:	Permitted only in designated area(s). Designated area(s) will be determined by SSO before work begins.			
Handwashing:	Water, soap and paper towels or equivalent supplies are located in field vehicles (AECOM and subcontractor) and in A Market Place. Site staff will wash hands and face after completing work activities and prior to breaks or meals.			
Toilets	**Toilets** are located inside A Market Place. *NOTE: A minimum of one toilet must be provided for every 20 personnel on site. For mobile crews where work activities and locations permit transportation to nearby toilet facilities on-site facilities are not required.*			

Water	**Water** is located field vehicles (AECOM and subcontractor) and at A Market Place. A water supply meeting the following requirements will be utilized: *Potable Water:* An adequate supply of potable water will be available for field personnel consumption. Potable water can be provided in the form of water bottles, canteens, water coolers, or drinking fountains. Disposable drinking cups for single use and a waste receptacle will be provided as needed. Water containers will be refilled daily and disinfected regularly. Potable water containers will be properly identified in order to distinguish them from non-potable water sources. *Non-Potable Water:* Non-potable water may be used for hand washing and cleaning activities. Non-potable water will not be used for drinking purposes. All containers of non-potable water will be marked with a label stating ***"Non-Potable Water, Not Intended for Drinking Water Consumption"***
Illumination	**Illumination** will be provided in the form of natural light (outside) and overhead lighting inside A Market Place restrooms.

Comment [OP1]: May need to update this depending on whether or not we can use restrooms. If not, we will mention that we can use the closest convince store restrooms. And remove any mention of using the Site for ANYTHING.

3.11 Lone Worker

AECOM discourages employees from working alone (i.e. where AECOM personnel are out of visual and audio range of others) when performing field tasks (see SH&E Procedure S3AM-314-PR, Working Alone). If lone work is to be performed, a communications/check-in plan must be developed and implemented using the table below.

Lone Worker:	Eddie Hubbert (only during groundwater sampling and well redevelopment). Mobile #: 1 (505) 401-5323
Justification:	Project does not require 2 staff members to complete.
Check-In Requirement:	Identify frequency, times, and method. AT MINIMUM check in is required within 1 hour of end of each shift. Verbal contact is preferred, all messages- voicemail, email, text- must have an exchange confirming receipt by the check-in contact.
Check-In Contact:	Dale Flores 505-401-2416 (cell) 505-855-7484
Hazard Summary:	The Site location is an operable auto repair and tire store with day time hours of operation. Store owner and lone worker will be working in the same vicinity and within verbal/audible range.
Response Plan:	If the lone worker does not respond to personal cell phone then call the A Market Place landline at X (XX) XXX-XXXX, or Valencia Animal Clinic at 1 (505) 864-4075.

Comment [OP2]: This may change if the Site is not actually operating.

Comment [OP3]: This may change if the Site is not actually operating.

3.12 Safety Observations

Safety observations are observations made by employees or subcontractors of a condition or behavior which could contribute to an incident, prior to the incident occurring. Observations can also identify positive behaviors or interventions which contribute to the prevention of incidents. Large, long-term projects may benefit from the use of LifeGuard to track and trend observations on a site level. All other projects should log their observations using IndustrySafe. Both reporting systems can be accessed on any safety page of ecosystem. Or the QR codes below can be used while off the AECOM network from a smartphone/ device.

LifeGuard

IndustrySafe
Safety Management Software

3.13 Short Service Employee

A Short Service Employee is an employee with fewer than 6 months experience working on field projects or an employee who has not completed the required training or received required certifications (see the Short Service Employee procedure, S3AM-002-PR). The Project Manager will identify all Short Service Employees working on the project, and each Short Service Employee will be assigned to an experienced team member so all activities may be monitored. Short Service Employees shall be easily identified in the field environment, such as through wearing a specific colored hardhat, a manufacturer-approved orange stripe applied to their hardhat, or be clearly identified by some other system. Any new employee shall wear the designated Short Service Employee identifier until the Project Manager determines the employee has the knowledge, skills, and ability related to the specific hazard on the project.

3.14 Stop Work Authority

AECOM empowers and expects all employees to exercise their Stop Work Authority (see Stop Work Authority Procedure S3AM-002-PR) if an incident appears imminent, or when hazardous behaviors or conditions are observed. A stop work request can be informal if the situation can be easily corrected, or may require shutting down operations if revised procedures are necessary to mitigate the hazard. If an AECOM employee observes an imminently hazardous situation on a site controlled by others (i.e., a client-managed contractor), the employee can always stop work for themselves by removing themselves from the situation. Employees also may attempt to stop work to avoid allowing the contractor to come to harm by immediately notifying the contractor foreman or site engineer, or if necessary, the client or party managing the contractor.

No employee should object to the issuance of a stop-work request, nor can any disciplinary action be levied against the employee. All employees must agree that the situation has been mitigated before resuming work. No employee will be disciplined for refusing to work if they feel it is unsafe.

4. Roles and Responsibilities

Roles and responsibilities for the project team are defined in SH&E Procedure S3AM-117-PR1, Hazardous Waste Operations. The Project Manager (PM) is ultimately responsible for the development of this HASP and establishing a budget to implement the controls and training required. The Project Manager is also responsible for ensuring that the plan is implemented, that appropriate documentation is generated, and that records are maintained. The SH&E Manager is responsible for reviewing and approving this HASP, and assisting with other SH&E matters upon request. A Site Safety Officer may be appointed to oversee implementation of the HASP in the field. All project team members are responsible for reviewing and abiding by this HASP, performing daily (or more frequent) task hazard assessments, stopping work when necessary to correct unsafe behaviors or conditions, and reporting incidents promptly to the PM and AECOM Incident Reporting Hotline (Incident Hotline 800-348-5046).

4.1 Project Manager

The Project Manager has overall management authority and responsibility for all site operations, including safety. The Project Manager will provide the site supervisor with work plans, staff, and budgetary resources, which are appropriate to meet the safety needs of the project operations. Some of the Project Manager's specific responsibilities include:

- Verifying that personnel, to whom this HASP applies, including AECOM subcontractors, have received a copy of it, with ample opportunity to review the document and to ask questions.
- Providing the concurring SH&E Manager with updated information regarding conditions at the site and the scope of site work if changes occur that will affect the accuracy of this HASP.
- Providing adequate authority and resources to the Site Supervisor or Site Safety Officer to allow for the successful implementation of all necessary SH&E Procedures.
- Maintaining regular communications with the Site Supervisor or Site Safety Officer and, when necessary, the AECOM Client SH&E Program Manager.
- Coordinating the activities of AECOM subcontractors and ensuring that they are aware of the pertinent health and safety requirements for these projects, when applicable.
- Conducting Safety System Auditing by way of Management Site Visits and/or Project Manager Self-Assessments on a regular basis.
- Approving amendments to the HASP (in conjunction with the Site Supervisor or Site Safety Officer).
- Coordinating activities with the client as needed to ensure the safe implementation of this HASP.

4.2 Site Supervisor

The Site Supervisor has the overall responsibility and authority to direct work operations at the job site according to the provided work plans and HASP. The Project Manager may act as the Site Supervisor while on site. The Site Supervisor's responsibilities include:

- Discussing deviations or drift from the work plan with the Site Safety Officer and Project Manager.
- Discussing safety issues with the Project Manager, Site Safety Officer, and field personnel.
- Assisting the Site Safety Officer with the development and implementation of corrective actions for site safety deficiencies.
- Assisting the Site Safety Officer with the implementation of this HASP and ensuring compliance.
- Assisting the Site Safety Officer with inspections of the site for compliance with this HASP and applicable SH&E Procedures.

- Reviewing Pre-Job Hazard Assessments (Pre-JHAs), Job Safety Analyses (JSAs) and Task Hazard Assessments (THAs) with the work crew.
- Reporting incidents and ensuring incidents and observations are logged into Lifeguard or IndustrySafe.
- Verifying that all operations are in compliance with the requirements of this HASP, and halting any activity that poses a potential hazard to personnel, property, or the environment.
- Temporarily suspending individuals from field activities for infractions against the HASP pending consideration by the Site Safety Officer, the SH&E Manager, and the Project Manager.

4.3 Site Safety Officer

The Site Safety Officer supports the Site Supervisor in providing a safe work environment. Not all sites will have a designated Site Safety Officer; the decision should be made by the Project Manager and SH&E Manager taking into consideration the complexity and risks of the scope of work. The Site Supervisor may act as the Site Safety Officer on sites without one. The Site Safety Officer's responsibilities include:

- Updating the site-specific HASP to reflect changes in site conditions or the scope of work. HASP updates must be reviewed and approved by the SH&E Manager.
- Inspecting the site for compliance with this HASP and the SH&E Procedures using the appropriate field audit inspection checklist found in IndustrySafe.
- Coordinating with Site Supervisor to review JSAs/ Pre-JHAs and THAs with the work crew.
- Assisting as needed to report incidents and verify that incidents and observations are logged into Lifeguard or IndustrySafe.
- Working with the Site Supervisor and Project Manager to develop and implement corrective action plans to correct deficiencies discovered during site inspections. Deficiencies will be discussed with project management to determine appropriate corrective action(s).
- Contacting the SH&E Manager for technical advice regarding safety issues.
- Determining emergency evacuation routes, establishing and posting local emergency telephone numbers, and arranging emergency transportation.
- Checking that all site personnel and visitors have received the proper training, orientation and medical clearance prior to entering the site.
- Establishing controlled work areas (as designated in this HASP or other safety documentation).
- Facilitating or co-leading daily tailgate meetings and maintaining attendance logs and records.
- Discussing potential SH&E hazards with the Site Supervisor, the SH&E Manager and the Project Manager.
- Selecting an alternate Site Safety Officer by name and informing him/her of their duties, in the event that the Site Safety Officer must leave or is absent from the site.
- Verifying that all operations are in compliance with the requirements of this HASP.
- Issuing a "Stop Work Order" under the conditions set forth in this HASP.
- Temporarily suspending individuals from field activities for infractions against the HASP pending consideration by the SH&E Manager and the Project Manager.

4.4 Employees

Responsibilities of employees associated with this project include, but are not limited to:

- Understanding and abiding by the SH&E Procedures specified in the HASP and other applicable safety policies, and clarifying those areas where understanding is incomplete.

- Providing feedback to SH&E management for continuous improvement relating to omissions and modifications in the HASP or other safety policies and procedures.
- Notifying the Site Supervisor or Site Safety Officer of unsafe conditions and acts.
- Stopping work if there is doubt about how to safely perform a task or if unsafe acts or conditions are observed (including subcontractors or team contractors).
- Speaking up and refusing to work on any site or operation where the SH&E procedures specified in this HASP or other safety policies are not being followed.
- Contacting the Site Supervisor or Site Safety Officer or the SH&E Manager at any time to discuss potential concerns.

4.5 Subcontractors

The requirements for subcontractor selection and subcontractor safety responsibilities are outlined in AECOM Procedure *S3AM-213-PR Subcontractor Management*. Each AECOM subcontractor is responsible for assigning specific work tasks to their employees. Each subcontractor's management will provide qualified employees and allocate sufficient time, materials, and equipment to safely complete assigned tasks. In particular, each subcontractor is responsible for equipping its personnel with any required personnel protective equipment (PPE) and all required training.

AECOM considers each subcontractor to be an expert in all aspects of the work operations for which they are tasked to provide, and each subcontractor is responsible for compliance with the regulatory requirements that pertain to those services as well as all other requirements applicable to their work. Each subcontractor is expected to perform its operations in accordance with its own unique safety policies and procedures, in order to ensure that hazards associated with the performance of the work activities are properly controlled. Copies of any required safety documentation for a subcontractor's work activities will be provided to AECOM for review prior to the start of on-site activities.

Hazards not listed in this HASP but known to any subcontractor, or known to be associated with a subcontractor's services, must be identified and addressed to the AECOM Project Manager or the Site Supervisor prior to beginning work operations. The Site Supervisor or authorized representative has the authority to halt any subcontractor operations, and to remove any subcontractor or subcontractor employee from the site for failure to comply with established health and safety procedures or for operating in an unsafe manner.

4.6 Visitors

Authorized visitors (e.g., client representatives, regulators, AECOM management staff, etc.) requiring entry to any work location on the site will be briefed by the Project Manager, Site Supervisor, or Site Safety Officer on the hazards present at that location. Visitors will be escorted at all times at the work location and will be responsible for compliance with their employer's health and safety policies. In addition, this HASP specifies the minimum acceptable qualifications, training and PPE that are required for entry to any controlled work area; visitors must comply with these requirements at all times.

If the site visitor requires entry to any exclusion zone (EZ), but does not comply with the above requirements, all work activities within the EZ must be suspended.

Unauthorized visitors, and visitors not meeting the specified qualifications, will not be permitted within established controlled work areas.

5. Training and Documentation

The following sections describe the standard practices or programs that AECOM will establish to prepare employees to perform work safely and consistent with AECOM policy and Procedures.

5.1 HASP/SITE Orientation

The Project Manager shall conduct a project/site-specific HASP orientation prior to the start of field operations, with support as needed by the SH&E Manager, Site Safety Officer, or Site Supervisor. This meeting will involve representatives from all organizations with a direct contractual relationship with AECOM on the job site. Minimum items to be covered are listed in **Attachment E**. Participants will then sign the HASP Personnel Acknowledgement register at the end of the HASP.

5.2 Daily Tailgate Meetings and THA Review

The Site Supervisor, Site Safety Officer or designee shall facilitate a tailgate meeting to discuss the specific requirements of this HASP, review the applicable JSAs/ Pre-JHAs and/or complete THAs prior to the commencement of daily project activities. Attendance at the daily tailgate meeting is mandatory for all employees and subcontractors at the site contracted to AECOM. Simultaneous operations are encouraged to attend each other's tailgate meetings or at the very least the supervisors shall discuss the coordination of activities and associated hazards of each other's tasks. The supervisor will then convey the information to the work crew. The Tailgate Meeting must be documented by the Site Supervisor or Site Safety Officer on a Daily Tailgate Meeting form, a blank copy of which is included in **Attachment F**.

As part of the daily tailgate meeting, employees and subcontractors will be encouraged to voluntarily warm up and stretch select muscle groups to the best of their ability and within each person's individual limitations. Stretching is particularly beneficial to warm and loosen muscles before repetitive work, manual handling of loads, and when working in cold temperatures or with static postures. The exercises included in Attachment C may be used to facilitate these efforts.

5.3 Worker Training and Qualifications

All personnel at this site must be qualified and experienced in the tasks they are assigned. SH&E Training Procedure S3AM-003-PR establishes the general training requirements for AECOM employees. In addition, S3AM-117-PR, Hazardous Waste Operations, explains the HAZWOPER training and S3AM-128-PR, Medical Screening and Surveillance, details the medical surveillance requirements.

Check all required training on the table below. Verify training records of employees and subcontractors.

Site-Specific Training Requirements	
Training	**Applies to**
☒ HASP Orientation	All Employees and Subcontractors
☒ HAZWOPER 40 –HR	On HAZWOPER sites, in EZ, exposed to hazardous contamination
☒ HAZWOPER Supervisor	Employees managing others in HAZWOPER activities
☐ Field Safety	Anyone visiting the field that does not require HAZWOPER
☐ Speak-Up/Listen Up	All Environmental Business Line Field Employees and Supervisors by end of FY2018
☐ Fit Test/ Respiratory Protection	Employees needing to wear respirators
☐ Hazardous Materials Shipping	Employee responsible for shipping HZM/HZW/DG and/or signing manifests
☒ Annual Medical Surveillance/ Clearance	Employees working in an exclusion zone and the regulatory required exposure limit **is** exceeded for 30 or more days a year

Site-Specific Training Requirements	
Training	**Applies to**
☐ Biennial Medical Surveillance/ Clearance	Working in an exclusion zone more than 30 days a year and the regulatory required exposure limit is **not** exceeded
☐ OSHA 10 hr. Construction	Employees working near heavy equipment
☐ OSHA 30 hr. Construction	Supervisor/SSO overseeing work with heavy equipment
☐ Local requirements:	
☐ Client requirements:	

5.4 Competent Person

A competent person is an employee who, through education, training and experience, has knowledge of applicable regulatory requirements, is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

AECOM's Competent Person Designation Procedure, S3AM-202-PR, explains the roles, responsibilities and procedures of naming a competent person. Complete the table below and include a S3AM-202-FM1 Competent Person Designation Form for each AECOM competent person (subcontractors to use an equivalent process).

These activities require a competent person. Mark all that apply and list the name of the person.

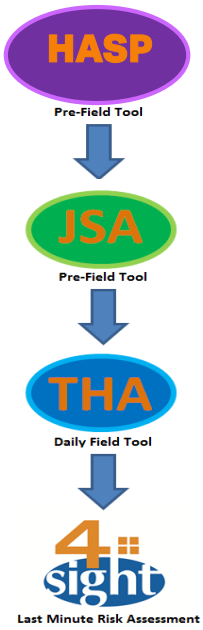
	Activity	Name of Person
☐	**Asbestos**	
☐	**Assured Equipment Grounding Conductor**	
☐	**Blasting & Explosives**	
☐	**Concrete & Masonry Construction**	
☐	**Confined Spaces**	
☐	**Control of Hazardous Energy (Lockout-Tagout)**	
☐	**Crane Assembly / Disassembly**	
☐	**Cranes & Derricks**	
☐	**Demolition**	
☐	**Electrical Wiring Design & Protections**	
☐	**Elevated Work Platforms & Aerial Lifts**	
☐	**Fall Protection**	
☐	**Hearing Protection**	
☐	**Heavy Equipment**	
☐	**Ionizing Radiation**	
☐	**Lead**	
☐	**Material Hoists & Personnel Hoists**	
☐	**Respiratory Protection**	
☐	**Rigging Equipment**	
☐	**Scaffolds**	
☐	**Stairways & Ladders**	
☐	**Steel Erection**	
☐	**Trench & Excavations**	
☐	**Underground Construction**	
☐	**Welding & Cutting**	

6. Hazard Assessment and Control

AECOM has adopted an approach to hazard assessment and control that incorporates both qualitative and quantitative methods to identify hazards and the degree to which they may impact employees and AECOM operations. See S3AM-209-PR, Risk Assessment and Management, for details regarding AECOM's process. This approach involves the following:

6.1 SH&E Procedures

All AECOM SH&E procedures, in their controlled copy version, are available on the internal SH&E Policy and Procedures ecosystem page. Programmatic procedures referenced in this document (for example SH&E Training) do no need to be printed for inclusion in this HASP. Only procedures that are needed for field activity reference and application MUST be printed in full and included in this HASP. The applicable field procedures checklist is in the Physical Hazards section below and procedures are included in **Attachment B**.



6.2 Job Safety analysis/ Pre-Job Hazard Assessment/

A Job Safety Analysis (JSA) or pre-job hazard assessment (Pre-JHA) is to be developed for each discrete task planned as part of the project. This assessment lays out the steps of the job, potential hazards, and mitigation measures. Form S3AM-209-FM4 or an equivalent may be used. A blank copy is included in **Attachment F**.

6.3 Task Hazard Assessment

The THA is a handwritten field form which is based on "Stop and Think" as the first thing you do before starting work activities often paired with the daily tailgate meeting or work permit issuance. Not all risks can be anticipated in this HASP or the JSA/ pre-job hazard assessment process; therefore, the THA is used to assess, mitigate, and document the site-specific conditions and changes to the hazard profile prior to and throughout the work task. Proper implementation of the THA program protects worker health and safety. A blank THA form is included in **Attachment F**. The THA must be signed by all employees each day and initialed whenever a changed condition provokes a change in hazard controls.

6.3.1 Hazard Categories

JSAs/ Pre-JHAs and THAs should include consideration of the following hazard categories when identifying hazards and task specific controls:

- Biological
- Chemical
- Electrical
- Gravity
- Mechanical
- Motion
- Pressure
- Noise
- Radiation
- Thermal

6.4 4-Sight

When preparing hazard assessments and throughout the day workers should use 4-Sight. This is a mental process through which workers ask themselves (and each other) four questions designed to effectively assess hazards. Using these questions during each task, especially those without formal JSA/ pre-JHA or THA, will help workers identify hazards and condition changes so that they can control them or stop work to seek assistance.

1) **What am I about to do?**
2) **What could go wrong?**
3) **What could be done to make it safer?**
4) **What have I done to communicate the hazards?**

6.5 Speak Up/Listen Up

All AECOM employees have a responsibility to help create the environment where the expectation is Safety For Life. Speak Up/Listen Up (SULU) is a technique to steward jobsite safety by utilizing 4-Sight as a basis for safety feedback conversations. SULU has two main parts:

- **Speak Up** where employees use three simple steps when providing feedback to others about unsafe acts:
  - Ask to discuss their hazard assessment or 4-Sight for the task
  - Get a commitment from the employee to apply the hazard controls and perform the task according to the accepted procedures
  - Follow up to ensure the employee is working safely

- **Listen Up** where employees use two simple steps when responding to safety feedback:
  - Listen – Focus on the message, not the messenger
  - Commit to performing the task the safer way

SULU conversations should happen consistently throughout the work day to create clear expectations of how work should be performed. All employees should recognize safe work behaviors in order to reinforce them and keep them going. An occasional correction is much more effective when employees are frequently encouraged and positively recognized for their safe actions. Managers and supervisors should be having SULU conversations during site visits and ensure peer to peer and site supervisor to crew SULU conversations are being held.

7. Physical Hazard Assessment

7.1 Physical Hazards

A physical hazard is a hazard that threatens the physical safety of an individual; contact with the hazard typically results in an injury. The following table summarizes the physical hazards or activities containing physical hazards present at the site and the associated procedures that address protection and prevention of harm.

All checked procedures MUST be included in **Attachment B** for implementation and reference.

Check all applicable hazards/ activities and add site specific description of the hazard.

	Hazard/ Activity *(note: text in this column links to procedure)*	Site Specific Description *[where, what phase of work, frequency, etc.]*	Applicable Procedure
☐	**Abrasive Blasting**		S3AM-335-PR
☐	**Aerial Work Platforms**		S3AM-323-PR
☐	**All-Terrain Vehicles**		S3AM-319-PR
☐	**Blasting and Explosives**		S3AM-336-PR
☐	**Bloodborne Pathogens**		S3AM-111-PR
☐	**Cofferdams**		S3AM-344-PR
☒	**Cold Stress**	Work performed during winter months	S3AM-112-PR
☒	**Compressed Air Systems and Testing**	Onboard compressed air system for BOS 200® injection system up to 1200 psi	S3AM-337-PR
☐	**Compressed Gases**		S3AM-114-PR
☒	**Concrete Work**	Mixing small batch to repair 2 inch diameter holes	S3AM-338-PR
☐	**Confined Spaces**		S3AM-301-PR
☐	**Corrosive Reactive Materials**		S3AM-125-PR
☐	**Cranes and Lifting Devices**		S3AM-310-PR
☐	**Demolition**		S3AM-339-PR
☐	**Diving (scientific and commercial)**		S3AM-334-PR
☒	**Drilling, Boring & Direct Push Probing**	27 DPT points within 680square feet	S3AM-321-PR
☐	**Electrical Safety**		S3AM-302-PR
☐	**Excavation**		S3AM-303-PR
☐	**Fall Protection**		S3AM-304-PR
☐	**Flammable and Combustible Liquids**		S3AM-126-PR
☐	**Gauge Source Radiation**		S3AM-122-PR
☒	**Hand and Power Tools**	Possible pneumatic tool(s) use for DPT/injection operations	S3AM-305-PR
☐	**Hazardous Waste Operations**		S3AM-117-PR
☒	**Heat Stress**	Work performed during summer months	S3AM-113-PR
☐	**Heavy Equipment**		S3AM-309-PR
☐	**High Altitude**		S3AM-124-PR
☐	**Highway and Road Work**		S3AM-306-PR
☒	**Hoists Elevators and Conveyors**	Occasional use to unload 1,000 lbs. super sack of activated carbon	S3AM-343-PR
☐	**Hot Work**		S3AM-332-PR
☐	**Ladders**		S3AM-312-PR
☐	**Lockout Tagout**		S3AM-325-PR

	Hazard/ Activity *(note: text in this column links to procedure)*	Site Specific Description *[where, what phase of work, frequency, etc.]*	Applicable Procedure
☐	**Machine Guarding Safe Work Practice**		S3AM-326-PR
☐	**Marine Safety and Vessel Operations**		S3AM-333-PR
☐	**Material Storage**		S3AM-316-PR
☐	**Mine Site Activities**		S3AM-341-PR
☐	**Mining Operations**		S3AM-345-PR
☐	**Non Ionizing Radiation**		S3AM-121-PR
☐	**Overhead Lines**		S3AM-322-PR
☐	**Powder-Actuated Tools**		S3AM-327-PR
☐	**Powered Industrial Trucks**		S3AM-324-PR
☐	**Radiation**		S3AM-120-PR
☐	**Railroad Safety**		S3AM-329-PR
☐	**Respiratory Protection**		S3AM-123-PR
☐	**Scaffolding**		S3AM-311-PR
☐	**Steel Erection**		S3AM-340-PR
☐	**Temp. Floors, Stairs, Railings, Toe-boards**		S3AM-342-PR
☐	**Underground Utilities**		S3AM-331-PR
☐	**Underground Work**		S3AM-330-PR
☐	**Wildlife, Plants and Insects**		S3AM-313-PR
☒	**Working Alone**	Potentially for groundwater monitoring/sampling	S3AM-314-PR
☐	**Working On and Near Water**		S3AM-315-PR

8. Chemical Hazard Assessment

AECOM will perform tasks that can expose personnel to a variety of hazards due to the operational activities, physical conditions of the work locations, and potential presence of environmental contaminants. This section presents a variety of potential chemical hazards, exposure pathways, and related mitigation actions. See S3AM-110-PR, Toxic and Hazardous Substances, for information on planning, training, monitoring, and details on several specific chemicals (Benzene, Cadmium, Chromium, Hydrogen Sulfide, Lead, and Silica).

8.1 Potential Chemical Hazards

The chemicals in the table below are known or suspected to be present at the site.

[Complete table, delete chemicals that do not apply to the site]

Summary of Hazardous Properties of Contaminant Exposure Hazards

PEL: .....Permissible Exposure Limits

TLV:.....Threshold Limit Values

		Chemical Name	Media	Primary Routes of Exposure	PEL	TLV	IP electron volts (eV)
Metals	☐	Antimony	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.5 mg/m^3	n/a
	☐	Arsenic	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.2 mg/m^3	n/a
	☐	Barium	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.5 mg/m^3	n/a
	☐	Beryllium	Soil, GW, Vapor, etc.	Dermal	2 µg/m^3	0.05 µg/m^3	n/a
	☐	Cadmium	Soil, GW, Vapor, etc.	Dermal	0.005 mg/m^3	0.01 mg/m^3	n/a
	☐	Chromium III	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.5 mg/m^3	n/a
	☐	Chromium VI	Soil, GW, Vapor, etc.	Dermal	0.005 mg/m^3	0.005 mg/m^3	n/a
	☐	Cobalt	Soil, GW, Vapor, etc.	Dermal	0.1 mg/m^3	0.02 mg/m^3	n/a
	☐	Copper	Soil, GW, Vapor, etc.	Dermal	1.0 mg/m^3	1.0 mg/m^3	n/a
	☐	Lead	Soil, GW, Vapor, etc.	Dermal	0.05 mg/m^3	0.05 mg/m^3	n/a
	☐	Manganese	Soil, GW, Vapor, etc.	Dermal	5 mg/m^3	0.2 mg/m^3	n/a
	☐	Mercury	Soil, GW, Vapor, etc.	Dermal	0.1 mg/m^3	0.025 mg/m^3	n/a
	☐	Molybdenum soluble	Soil, GW, Vapor, etc.	Dermal	5 mg/m^3	0.5 mg/m^3	n/a
	☐	Nickel	Soil, GW, Vapor, etc.	Dermal	1 mg/m^3	0.5 mg/m^3	n/a
	☐	Selenium	Soil, GW, Vapor, etc.	Dermal	0.2 mg/m^3	0.2 mg/m^3	n/a
	☐	Silver	Soil, GW, Vapor, etc.	Dermal	0.01 mg/m^3	0.01 mg/m^3	n/a
	☐	Vanadium	Soil, GW, Vapor, etc.	Dermal	0.05 mg/m^3	0.05 mg/m^3	n/a
	☐	Zinc	Soil, GW, Vapor, etc.	Dermal	15 mg/m^3	10 mg/m^3	n/a
Pesticides	☐	endrin	Soil, GW, Vapor, etc.	Dermal	0.1 mg/m^3	0.1 mg/m^3	n/a
	☐	dieldrin	Soil, GW, Vapor, etc.	Dermal	0.25 mg/m^3	0.25 mg/m^3	n/a
	☐	Lindane/ gamma BH C	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.5 mg/m^3	n/a
	☐	4,4' – DDE[1]	Soil, GW, Vapor, etc.	Dermal	1 mg/m^3	0.5 mg/m^3	n/a
	☐	4,4' – DDT[1]	Soil, GW, Vapor, etc.	Dermal	1 mg/m^3	0.5 mg/m^3	n/a
	☐	4,4' – DDD[1]	Soil, GW, Vapor, etc.	Dermal	1 mg/m^3	0.5 mg/m^3	n/a
	☐	alpha-Chlordane [2]	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.5 mg/m^3	n/a
	☐	gamma-Chlordane [2]	Soil, GW, Vapor, etc.	Dermal	0.5 mg/m^3	0.5 mg/m^3	n/a
	☐	Endosulfan I	Soil, GW, Vapor, etc.	Dermal	None	0.1 mg/m^3	n/a

1. *Exposure limits based on DDT.*
2. *Exposure limits based on Chlordane. No PELs are set for alpha or gamma chlordane.*

		Chemical Name	Media	Primary Routes of Exposure	PEL	TLV	IP electron volts (eV)
Common Site COCs	☐	1,1,2,2-Tetrachloroethane	Soil, GW, Vapor, etc.	Inhalation	5 ppm	1 mg/m3	~11.1
	☐	Asbestos **Include S3AM-109-PR Asbestos in Attachment B**	Soil, GW, Vapor, etc.	Inhalation	0.1 f/cm^3	0.1 f/cm^3	n/a
	☒	Benzene	Soil, GW, Vapor, etc.	Inhalation	1 ppm	0.5 ppm	9.25
	☐	Coal tar pitch hydrocarbons PAH	Soil, GW, Vapor, etc.	Inhalation	0.2 mg/m^3	0.2 mg/m^3	n/a
	☐	Di-(2-Ethylhexyl)phthalate	Soil, GW, Vapor, etc.	Inhalation	5 mg/m^3	5 mg/m^3	9.64
	☒	Diesel fuel (TPH-DRO)	Soil, GW, Vapor, etc.	Inhalation	n/a	15 ppm	n/a
	☐	Dioxins/furans	Soil, GW, Vapor, etc.	Inhalation	n/a	n/a	9.19/8.89
	☐	Dust	Soil, GW, Vapor, etc.	Inhalation	15 mg/m^3	10 mg/m^3	n/a
	☒	Ethylbenzene	Soil, GW, Vapor, etc.	Inhalation	100 ppm	20 ppm	8.77
	☒	Gasoline (TPH-GRO)	Soil, GW, Vapor, etc.	Inhalation	n/a	300 ppm	n/a
	☐	Hydrogen sulfide	Soil, GW, Vapor, etc.	Inhalation	20 ppm	1 ppm	10.46
	☐	Methane	Soil, GW, Vapor, etc.	Inhalation	n/a	1,000 ppm	12.61
	☐	Oils (TPH-LRO)	Soil, GW, Vapor, etc.	Inhalation	5 mg/m$^{3\,b}$	5 mg/m$^{3\,b}$	n/a
	☐	Phenol	Soil, GW, Vapor, etc.	Inhalation	5 ppm	5 ppm	8.5
	☐	Polychlorinated biphenyls (PCBs)	Soil, GW, Vapor, etc.	Absorption, ingestion	1 mg/m^3 (42% chlorine); 0.5 mg/m^3 (54% chlorine)	1 mg/m^3 (42% chlorine); 0.5 mg/m^3 (54% chlorine)	n/a
	☐	Silica	Soil, GW, Vapor, etc.	Inhalation	See OSHA website for formula		n/a
	☐	Tetrachloroethylene (PCE)	Soil, GW, Vapor, etc.	Inhalation	100 ppm	25 ppm	9.32
	☒	Toluene	Soil, GW, Vapor, etc.	Inhalation	200 ppm	20 ppm	8.82
	☒	Xylene	Soil, GW, Vapor, etc.	Inhalation	100 ppm	100 ppm	8.45, 8.56
	☐	Other	Soil, GW, Vapor, etc.	Add Info	Add Info	Add Info	Add Info

8.2 Potential Exposure Pathways

Occupational exposure to chemical hazards associated with the work activities could potentially occur by two primary routes (inhalation and skin contact) and one indirect route (incidental ingestion).

8.2.1 Inhalation

The primary risks associated with AECOM's scope of work pertain to potential exposure to airborne contaminants and explosion hazards. Constituents that potentially pose an occupational concern to employees by the inhalation route are carbon monoxide, hydrogen sulfide, methane, and volatile organic compounds. Air monitoring will be performed within the employee breathing zone to assess the need to implement appropriate control measures or stop work. In addition, air monitoring will be performed at the source to assess potential explosion hazards.

8.2.2 Skin Contact

Personnel handling residual product or waste and associated equipment may be exposed to chemical hazards by skin contact or adsorption. However, exposure is expected to be limited since workers will be required to wear appropriate PPE (i.e. appropriate work gloves, body clothing, and/or face shield).

8.2.3 Ingestion

Personnel handling residual product or waste and associated equipment, including project hazardous materials, may be exposed by incidental ingestion. Typically, this exposure occurs if proper PPE was not used or personal hygiene was not practiced. Personal protection against exposure via ingestion can be accomplished by performance of proper decontamination procedures when exiting contaminated work areas as well as using the correct PPE.

8.3 Decontamination

All possible and necessary steps shall be taken to reduce or minimize contact with chemicals and contaminated/impacted materials while performing field activities. Decontamination steps are outlined in Hazardous Waste Operations procedure S3AM-117-PR. Some key elements are as follows:

- All persons and equipment entering the EZ shall be considered contaminated, and thus, must be properly decontaminated prior to exiting to clean areas of the site.
- Avoid reactions between the solutions and contaminated materials. Review the applicable SDS.
- All contaminated PPE and decontamination materials shall be contained, stored and disposed of in accordance with site-specific requirements determined by site management.
- Use caution while working around decontamination stations, including the decontamination pad, which may be a slip or trip hazard.
- Use disposable equipment when possible and practical.
- All employees performing equipment decontamination shall wear the appropriate PPE to protect against exposure to contaminated materials. The level of PPE may be equivalent to the level of PPE required in the EZ. Other PPE may include splash protection, such as face-shields and splash suits, and knee protectors.
- All decontaminated equipment shall be visually inspected for contamination prior to leaving the Contaminant Reduction Zone (CRZ).

Decontamination Procedures & Equipment	
Procedure	***Equipment Needed***
Clean injection rods	5-gallon bucket or small decontamination pad. Potable water and Alconox, or similar, laboratory cleaner

Equipment Decontamination Procedures		
Type Equipment	***Decontamination Solution***	***Procedure***
Injection rods	Alconox, or similar, and potable water per manufacture mixture	Brush off excess soil down hole. Wash injection rod with Alconox, or similar, solution. Rinse injection rod with potable water.

Waste Handling for Decontamination	
Waste Streams/Products	***Disposal Procedures***
Soil	No anticipated IDW soil due to DPT injection work. Brush excess soil off of injection rods down hole.
Development and Purge Groundwater	Only small volumes will be generated. Discharge to ground.
Decontamination/rinse water	Only small volumes will be generated. Discharge to ground.

8.4 Air Monitoring

Monitoring shall be performed within the work area on site in order to detect the presence and relative levels of toxic substances. The data collected throughout monitoring shall be used to determine the appropriate levels of PPE. Monitoring shall be in accordance with Exposure Monitoring Procedure S3AM-127-PR and specified in the work permit and/or JSAs/ Pre-JHAs for the tasks. Key elements of the procedure include:

- Calibration of monitoring equipment and/or daily bump tests to verify calibrations and confirm alarm function.
- Personal monitoring and result evaluation must be directed by a Certified Industrial Hygienist or Certified Safety Professional.

8.4.1 Real-Time Exposure Measurement/ Equipment

Monitoring shall be performed within the work area on site in order to detect the presence and relative levels of toxic substances. The data collected throughout monitoring shall be used to determine the appropriate levels of PPE. Monitoring shall be conducted as specified in the work permit and JSAs/ Pre-JHAs as work is performed. All instrumentation need to be rated intrinsically safe to prevent fire or explosion.

Check which real-time monitoring equipment will be used and update the model type if needed:

	Instrument	Manufacturer/Model	Substances Detected
☐	**Photo Ionization Detector (PID)**	RAE Systems mini-RAE Photovac Microtip HNu Model Hnu (min. 10.6 eV bulb)	• Petroleum hydrocarbons • Organic Solvents
☐	**Multi or 4 Gas Detectors**	RAE Systems Multi-RAE	• Lower Explosive Limit • Oxygen • Carbon Monoxide • Hydrogen Sulfide
☐	**Combustible Gas Indicator (CGI)** *May be combined with individual or multi-gas detectors.*		• Explosivity
☐	**Particulate Monitor**	MIE Model PDM-3 mini-RAM	• Aerosols, mist, dust, and fumes
☐	**Personal Monitoring/ Badges**	[insert]	• [insert]

8.4.2 Health and Safety Action Levels

An action level is a point at which increased protection is required due to the concentration of contaminants in the work area or other environmental conditions. The concentration level (above background level) and the ability of the PPE to protect against that specific contaminant determine each action level. The action levels are based on concentrations in the breathing zone.

If ambient levels are measured which exceed the action levels in areas accessible to unprotected personnel, necessary control measures (barricades, warning signs, and mitigation actions to limit, etc.) must be implemented prior to commencing activities at the specific work area.

Personnel should also be able to upgrade or downgrade their level of protection with the concurrence of Site Supervisor or Site Safety Officer or the Safety Manager.

Reasons to Upgrade:

- Known or suspected presence of dermal hazards;
- Occurrence or likely occurrence of gas, vapor, or dust emission; or
- Change in work task that will increase the exposure or potential exposure to hazardous materials.

Reasons to Downgrade:

- New information indicating that the situation is less hazardous than was originally suspected;
- Change in site conditions that decrease the potential hazard; or
- Change in work task that will reduce exposure to hazardous materials.

8.4.3 Monitoring Procedures

The monitoring procedures shown below are general guidelines for sampling activities. The reviewing SH&E Manager may modify any or all of these for site-specific application. A reading in excess of action level outlined below will require additional ventilation for 30 minutes, followed by re-monitoring.

Monitoring Procedures and Action Levels

Parameter	Zone Location and Monitoring Interval	Response Level	Response Activity
Volatile Organic Compounds (VOCs) and volatile hydrocarbons (total by PID)	Breathing zone, continuously during tasks where exposure to VOCs and volatile hydrocarbons is possible	< 5 ppm	Continue monitoring, may continue work in required PPE
		5- 25 ppm (sustained for 5 minutes)	STOP WORK and notify PM. Investigate the cause of elevated VOC measurements and identify measures to reduce concentrations (cover impacted soils, ventilation, etc.). Work activities shall only continue once levels have decreased to or below 5 units above background. If levels continue above 5 units, only individuals who are medically qualified to wear respiratory protection are permitted to continue work activities with Project Manager approval. Don Level C PPE (organic vapor respirator cartridges), continue monitoring, and initiate continuous air monitoring for benzene.
		> 25 ppm (sustained for 5 minutes)	Cease work, exit, and contact the Site Safety Officer, Site Supervisor and Project Manager.
Benzene (by PID with benzene-specific separation tube)	Breathing zone, continuously where indicated by VOC readings	> 0.25 ppm	Cease work, exit the area, and contact the Site Safety Officer, Site Supervisor and Project Manager.
Hydrogen Sulfide (multi-gas detector or individual H_2S meter)	Breathing zone, continuously during tasks where exposure to hydrogen sulfide is possible	< 5 ppm	Continue work activities. Contact the Site Safety Officer to investigate the potential for contributing factors.
		> 5 ppm	Cease work, exit the area or confined space, and contact the Site Safety Officer, Site Supervisor and Project Manager..
Combustible Gas (multi-gas meter or individual combustible gas indicator, CGI)	Breathing zone or in the immediate work area continuously during tasks where explosive atmospheres are possible	> 5% of LEL	Cease work, exit, and contact the Site Safety Officer, Site Supervisor and Project Manager..
Oxygen (O_2) (multi-gas detector or individual O_2 meter)	Breathing zone, continuously during tasks were oxygen enriched or deficient atmospheres are possible	< 19.5 % O_2	Cease work deficient atmosphere), exit the area or confined space, and contact the Site Safety Officer, Site Supervisor and Project Manager..
		> 23.5 % O_2	Cease work enriched atmosphere) , exit the area or confined space, and contact the Site Safety Officer, Site Supervisor and Project Manager..
Carbon Monoxide (CO) (multi-gas detector or individual CO meter)	Breathing zone, continuously during tasks where exposure to CO is possible	< 10 ppm	Continue work in Level D and continue monitoring
		> 10 ppm	Cease work, exit the area or confined space, and contact the Site Safety Officer, Site Supervisor and Project Manager..
Dust not otherwise classified (total by aerosol monitor)	Breathing zone every 30 minutes during field activities where exposure to excessive dusts are possible	< 5 mg/m^3	Continue work in Level D and continue monitoring
		> 5 mg/m^3	Upgrade to Level C (P100 respirator cartridges), implement dust suppression measures; contact the Site Safety Officer & Site Supervisor.
		> 10 mg/m^3	Cease activities, implement more effective dust suppression measures; contact the Site Safety Officer & Site Supervisor.
Dust not otherwise classified (total by aerosol monitor)	Edge of Exclusion Zone, every 30 minutes during excavation activities	< 5 mg/m^3	Continue work in required PPE, monitor air, and implement engineering controls
		> 5 mg/m^3	Cease activities and contact the Site Safety Officer & Site Supervisor.

9. Environmental Impact Prevention

AECOM strives to avoid or control environmental impacts from our operations through planning and implementation of best practices as well as preparing responses to react to environmental incidents. Environmental Compliance procedure S3AM-204-PR provides details on permitting and planning requirements.

	Potential Environmental Impact	Description of Hazard and Permit or Control Being Implemented
☐	**Air Emissions**	Any operations where air emissions may negatively impact the surrounding environment, air emission permits, etc. and discuss associated control
☐	**Hazardous Waste Management**	Storage, treatment, or disposal of hazardous waste at the project site, RCRA Part B permits or equivalent, 90-day storage procedures, etc.
☐	**Storm Water Pollution**	Operations that may generate/discharge storm water from the project site, NPDES/general construction storm water discharge permits, etc.
☐	**Wetlands**	Use the FWS online wetlands mapper (http://www.fws.gov/wetlands/Data/mapper.html) to determine if any wetlands exists on your project site, are adjacent to your project, or may be negatively impacted by your project, any regulatory permits and control measures
☐	**Critical Habitat**	Use the FWS online critical habitat mapper tool (http://criticalhabitat.fws.gov/) to determine if any plant or animal critical habitats exists on, adjacent to, or may be otherwise impacted by your project, any regulatory permits and control measures
☐	**Other:**	

9.1 Incidental Spill Prevention and Containment

Spill prevention and containment planning must be conducted and appropriate control measures established, consistent with regulatory requirements. Personnel are not expected to perform a response action related to an uncontrolled release of a hazardous substance. However, in the event of an incidental release of a hazardous material, a response will be performed to absorb, neutralize or otherwise control the release within the immediate work area. Procedures contained in the SDS of the hazardous material will be implemented to perform the response. The Emergency Response section of this HASP contains information on spill reporting, pre- and post- spill evaluation, and response

9.1.1 Spill Prevention and Containment Practices

Work activities may involve the use of hazardous materials (i.e. fuels, solvents) or work involving drums or other containers. When these activities exist the procedures outlined below will be used to prevent or contain spills:

- All hazardous material will be stored in appropriate containers and labelled.
- Tops/lids will be placed back on containers after use.
- Containers of hazardous materials will be stored appropriately away from moving equipment.
- Containers shall only be lifted using equipment specifically manufactured for that purpose.
- Drums/containers will be secured and handled in a manner which minimizes spillage and reduces the risk of musculoskeletal injuries.
- Equipment will be inspected daily for signs of leaks, wear, or strain on parts that, if ruptured or broken, would result in a spill.

- Refueling should occur in designated areas where incidental spills can be prevented from reaching permeable ground surfaces.
- Whenever possible, position parked or stationary equipment over secondary containment and/ or absorbent materials to prevent spills from reaching permeable ground surfaces.
- A spill response kit, to include an appropriate empty container, materials to allow for booming or diking the area to minimize the size of the spill, and appropriate clean-up material (i.e. speedy dri, absorbent pads, etc.) will be available on the project site and positioned for quick and easy access.

10. Personal Protective Equipment

PPE is considered the last line of defense in hazard control. PPE is meant to protect workers when all other methods (elimination, substitution, engineering, and administrative) have been exhausted. All employees must be trained in the proper use and maintenance of PPE. See Procedure S3AM-208-PR, Personal Protective Equipment.

A PPE assessment (see S3AM-208-FM1) can be performed to help determine PPE requirements. PPE upgrades for individual tasks or steps of a task are to be identified in JSAs/ Pre-JHAs or THAs.

Minimum Required PPE (per AECOM PPE and HAZWOPER Procedures):

- Hard hat
- Safety glasses w/ side shields (may be clear or shaded)
- Safety toe work boots
- Long pants and shirts with sleeves (short or long- cover shoulders no tank or muscle shirt styles)

Complete the table below for site-specific PPE:

Additional PPE Needed On Site

(to encompass all task specific additions and upgrades)

Face/ Eyes		Head/ Ears	
☐ Spoggles (Safety Glasses with foam liner for dust protection)	☐ Chemical Goggles	☐ Helmet with Chin Strap	☒ Earplugs
☐ Welding Mask/Goggles	☒ Face Shield (splash)	☒ Wide Brimmed Hat	☒ Over-ear Hearing Protection
	☐ Face Shield (impact)		

Hands		Legs/ Feet	
☒ Nitrile	☐ Other Chemical Resistant : *(specify)*	☐ High Ankle Boots	☐ Metatarsal Guards
☒ Leather		☐ Snake Guards	☐ Electrically-resistant boots
☐ Cut, Abrasion and Puncture Resistant		☐ Rubber Boots/Waders	
☐ Impact-resistant			

Body	Equipment
☒ Sunscreen	☐ **Air/Noise Monitoring Equipment:** *(specify)*
☐ Insect Repellent (DEET)	
☐ Permethrin Applied to Clothing	☒ **Traffic/Work Zone Control Equipment:** *(specify)* Cones, tape, vehicles to make exclusion zone next to shared gravel access.
☐ Long-sleeved Shirt	
☒ High-visibility Vest	☐ **Communication Beyond Cell Phones:** *(specify)*
☐ High-visibility Pants	
☐ Disposable Coveralls	☐ **Fire Controls:** *(specify)*
☐ Flame Retardant Clothing	
☐ Fall Protection	
☐ Personal Floatation Device	
☐ Other: *(specify)*	

11. Site Control

The purpose of site control is to protect the public from inadvertently coming into contact with site hazards and to protect AECOM employees being impacted by hazards. This section details the equipment and actions needed to promote optimal site control.

11.1 Site Work Zones

Site layout and site control need to be coordinated achieve a productive work environment and efficient work process while minimizing exposure of employees and the public to hazards associated with the work. Consider the following items when planning the site layout and controls:

- "Line of Fire" hazards- overhead utilities, falling/ tipping equipment, release of energy/ pressure, flying debris,
- Noise, dust, odor suppression
- Contamination containment and decontamination area layout
- Traffic control for site vehicles/ equipment (public traffic control requires Traffic control Plan)
- Restricted access for areas requiring special training, skills, or certifications
- Restriction of work near railroads
- Presence or creation of excavations
- Loading/unloading areas
- Portable restrooms
- Dumpsters and bins
- Equipment lay down
- Heavy equipment parking
- Overnight safety and security needs

Check the description of the site controls **already** in place:

☐ Work area is within a facility/ property with secure and restricted access provided by client or third party

☐ Work area is enclosed within facility/ property but access is not restricted via locks, guards, or gates

☒ Work area is on a property that is open and access by the public is likely

☐ Work area is on a property that is open but access by the public is unlikely

☐ Work area is in a roadway or right of way of a roadway (Traffic Control Plan required S3AM-306-PR)

☐ Work area is on or near railroad (including right of way, active lines, and crossings)

☐ Other: *(describe)*

_____

_____

Check and describe the site controls that need to be added to protect the public and the AECOM work team.

	Control Item	Description of Type and Application
☐	**Fence**	
☐	**Locks**	
☐	**Barricades**	
☒	**Cones**	Cones, tape, vehicles to make work zone next to shared gravel access
☒	**Tape**	Cones, tape, vehicles to make work zone next to shared gravel access
☒	**Hole Covers**	As necessary for any well vaults left open and unattended during operations
☐	**Other:**	

11.2 Site Control Map/ Diagram

No exclusion zone is required for this project. A safe work zone will be set up around monitor wells MW-3 and MW-4 totaling 900 square feet.

11.3 Simultaneous and Neighboring Operations

Simultaneous and neighboring operations present a need for added coordination and communication to address hazards that are presented by multiple operations.

Complete the tables below or mark "N/A"

	Activity/ Company	Hazard	Controls/Mitigations and Communication Methods
Simultaneous Operation *(within the site)*	N/A		
Neighboring Operation *(outside/ bordering the site)*	N/A		

11.4 Site Security

All projects should be reviewed for the potential for personal security issues (e.g., assault, robbery, threat, etc.). Check all of the following that apply:

- ☐ Project site located in a higher crime area or has a history of security incidents
- ☐ Working outside of regular cellular telephone service
- ☐ Idle property with potential for trespasser(s) to shelter in buildings/structures and assault personnel
- ☐ Working at night

Detail the security measures to address the above risks: N/A

12. Emergency Response

AECOM requires that all projects plan for reasonably foreseeable emergencies (see Emergency Response Planning Procedure S3AM-010-PR). Prior to the start of site operations, all personnel shall review the table below for site-specific information regarding evacuations, muster points, communication, and other site-specific emergency procedures. An Incident Response Flow Chart is included in **Attachment A**.

12.1 Incident/ Emergency Contact Information

AECOM Contacts			
Name	**Title**	**Telephone Number**	**Mobile Phone**
Dale Flores	Project Manager	1-505-855-7484	1-505-259-7823
Eddie Hubbert	Site Supervisor	1-505-855-7527	1-505-401-5352
Eddie Hubbert	Site Safety Officer	1-505-855-7527	1-505-401-5352
Jerry Aldridge	Region SH&E Manager	1-979-230-2184	1-979-230-8039
Tim Joseph	Area SH&E Manager	1-303-740-2767	1-303-884-2548
[insert] if applicable	Client Account SH&E Manager	[insert] if applicable	[insert] if applicable
[insert] if applicable	Client Account Operations Manager	[insert] if applicable	[insert] if applicable
Incident Reporting	DCS Incident Reporting & Help Line	800-348-5046	
AECOM Nurse direct	Use only after incident reporting line	877-878-9525	
Client Contacts			
Name	**Title**	**Telephone Number**	**Mobile Phone**
Jack Dickey	Client Project Manager	1-505-222-9563	
	Other Client Stakeholder	[insert]	[insert]
Organization/Agency			
Police Department (local)			911
Fire Department (local)			911
Ambulance Service (EMT will determine appropriate hospital for treatment)			911
Hospital: (Site personnel to use for emergency care) Presbyterian Kaseman Hospital 8300 Constitution AVE NE Albuquerque, NM 87110 ***Approximately 55 Minutes***			1-505-291-2000
Occupational Clinic: (Site personnel to use for non-emergency care) Concentra Medical Center 3101 Menaul Blvd. NE Ste. B Albuquerque, NM 87107			1-505-842-5151
Poison Control Center			(800) 222-1222
Pollution Emergency (obtain state spill response number from S3AM-117-ATT1)			1-800-424-8802
INFOTRAC (AECOM's account number 74984)			800-535-5053
AECOM Hazardous Material Shipping Help Line			800-381-0664

Public Utilities	
[Insert names and contact information of public utilities serving the project area]	[insert]
Call Before You Dig	811

12.2 Muster Location

The muster location will be determined by the SSO and field crew during the first day safety brief.

12.3 Communication Procedures

The work area is small and communications will be face to face or verbal. Communications with emergency response agencies will be handled with cell phones.

12.4 CPR/ First Aid Trained Personnel

Eddie Hubbert will serve as SSO and is trained in CPR/First Aid.

12.5 Incident Reporting

Incidents involving or affecting an AECOM employee or subcontractor will be reported in a prompt manner verbally to the site supervisor and project manager.

1. If the incident is a significant or life-threatening emergency, the employee or supervisor shall immediately dial 911 or the appropriate emergency contact phone number for your site.
2. The employee or supervisor shall contact the Incident Hotline (800-348-5046).
3. The employee or supervisor must notify their operational leaders and the Area SH&E Manager.
4. The supervisor, or delegate, must make initial notification in IndustrySafe within 4 hours for significant incidents, or 24 hours for less significant events event.
5. Client and account management notifications may also apply. The Project Manager will make any necessary notifications.

Any injury, even if no treatment is required, and any incident for which assistance by SH&E Management is needed must be immediately communicated to the Incident Hotline at 1-800-348-5046.

All incidents are also to be reported to IndustrySafe within the timeframes listed below:

Incident Type	IndustrySafe Reporting Time Frame
Significant Incident, including any injury	➔ 4 Hours
All Other Incidents	➔ 24 Hours

Significant Incident:

- Fatality;
- Amputation;
- Hospitalization for treatment for more than 24 hours (admission);

- Any single event resulting in more than one employee requiring medical treatment or more than one employee being away from work more than 3 days;
- Any SH&E-related Consent Agreement/Order/Lawsuit or enforcement action seeking more than $10,000 or alleging criminal activity;
- Any spill or release of a hazardous material that is reportable to a regulatory agency;
- Any Notices of Violation resulting from not operating within a regulatory agency permit/license or consent;
- Any incident resulting in property damage expected to exceed $10,000 United States (US) dollars;
- Any security-related incident that could have caused significant harm to an AECOM employee; and/or
- Any Near Miss event that may have resulted in any of the above consequences but because of "luck" did not result in harm to persons, property or the environment.

All Other Incidents:

- Any injury or illness to an AECOM employee or subcontractor, even if it does not require medical attention, including work-related injuries/illnesses that have become significantly aggravated by the work environment;
- An injury to a member of the public, or clients, occurring on an AECOM-controlled work site;
- Re-occurring conditions such as back pain or cumulative trauma disorders (e.g., carpal tunnel syndrome);
- Fire, explosion, or flash that is not an intended result of a planned event (e.g., remediation process, laboratory Procedure);
- Any incident involving company-owned, rented, or leased vehicles (including personal vehicles used for company business); and/or
- Any failure to comply with the requirements of a regulatory permit issued to AECOM.
- Scan the QR code below to access IndustrySafe reporting system from your smartphone/ device.

IndustrySafe
Safety Management Software

12.6 Medical Emergencies

In the event of a life-threatening or critical emergency, AECOM employees should dial 911 and follow the recommended instructions. However, in less serious situations, an injured employee or a co-worker should contact the Incident Hotline at 800-348-5046 to ensure that the employee receives the best care at the best time (i.e., within the first hour following an injury or potential injury). By contacting the Incident Hotline, the worker can be connected with AECOM's nurses for first aid advice. If recommended by the nurse, the supervisor or a co-worker should drive the injured employee to the project-designated clinic or hospital. A map to the designated hospital and clinic is attached as **Attachment A** and the locations and addresses are included in the table above as well as in the HASP Summary on Page i.

12.7 Vehicle Incidents

All vehicles should be rented through Carson Wagonlit Travel (accessible via Ecosystem) to ensure that AECOM insurance is included in the rental rate. All other insurances should be declined. AECOM's rental vehicle insurance policy for National/Enterprise or Avis can be found on the DCS Americas United States or Canada travel pages. **Drivers MUST print and carry the applicable insurance policy for the rental**.

In the event of a vehicle incident (including collisions as well as mechanical difficulties such as breakdowns and flat tires) the following responses are recommended:

- For breakdowns and flat tires, contact an emergency provider.
- For rental vehicles, contact the rental company.

- To the extent possible, AECOM personnel should not change flat tires or perform similar repairs.
- If a collision has occurred, assess the situation and move all occupants (except the injured) out of further harm's way. If safe to do so, remove the car from the traveled way. Call 911 if necessary, and report the incident to the Incident Hotline at 800-348-5046 as soon as practical. If appropriate, wait for police to arrive before moving vehicles. Provide insurance information to other drivers if necessary or requested and collect the same. If possible, obtain names and phone numbers of witnesses. Take photographs of the scene if possible. DO NOT ADMIT LIABILITY, AGREE TO PAY FOR DAMAGE, OR SIGN A DOCUMENT RELATED TO AN INCIDENT EXCEPT AS REQUIRED BY LAW.

12.8 Spill or Release

AECOM employees are not expected to take action or to participate in rescues or responses to chemical releases (including of petroleum products) beyond the initial discovery of the release and immediate mitigation actions such as closing a valve, placing absorbents, and notifying the client and or public emergency response system (911), unless there is a contractual provision for this response and specially trained employees.

12.8.1 Environmental Spill/Release Reporting

All environmental spills or releases of hazardous materials (e.g., fuels, solvents, etc.), whether in excess of the Reportable Quantity or not, will be reported according to the incident reporting procedure. In determining whether a spill or release must be reported to a regulatory agency, the Site Supervisor or qualified worker will assess the quantity of the spill or release and evaluate the reporting criteria against the state-specific reporting requirements, applicable regulatory permit, and/or client-specific reporting procedures. **If reporting to a US state or Federal regulatory agency is required, AECOM has 15 minutes from the time of the spill/release to officially report it.**

Chemical-specific Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Reportable Quantities for the known chemicals onsite are shown in the table below.

CERCLA Reportable Quantities

Hazardous Substance	Regulatory Synonyms	Final RQ (lbs)
1,1,1-Trichloroethane	TCA	1,000
Arsenic	N/A	1
Benzene	N/A	10
Cadmium	N/A	10
Carbon Tetrachloride	N/A	10
Chromium	N/A	5,000
Ethyl Benzene	N/A	1,000
Lead	N/A	10
Mercury	N/A	1
Methyl Ethyl Ketone	MEK	5,000
Nickel	N/A	100
Pentachlorophenol	PCP	10
Selenium	N/A	100
Tetrachloroethylene	Perchloroethylene, PCE	100
Toluene	N/A	1,000
Trichloroethylene	Trichloroethene, TCE	100
Xylene	N/A	100

CERCLA RQ's can be found at: http://www.epa.gov/oem/docs/er/302table01.pdf

The spill containment program addresses the following site-specific information:

- Potential hazardous substance spills and available controls;
- Initial notification and response;
- Spill evaluation and response; and
- Post-spill evaluation.

12.8.2 Spill Evaluation and Response

The SSO is responsible for evaluating spills and determining the appropriate response. When this evaluation is being made, the spill area is isolated and demarcated to the extent possible. When an incidental release occurs, clean-up personnel receive instructions in a pre-clean-up meeting as to spill conditions, PPE, response activities, decontamination, and waste handling.

The procedures of the Emergency Response section of this HASP are immediately implemented when the spill is determined to require emergency precautions and action. If necessary to protect those outside the clean-up area, notification of the appropriate authorities is made. Table 10-2 lists the spill conditions that trigger notification of Federal, state, and local agencies.

The following are general measures that response/clean-up personnel take when responding to a spill:

- To minimize the potential for a hazardous spill, hazardous substances, control/absorbent media, drums and containers, and other contaminated materials are properly stored and labeled;
- When a spill occurs, only those persons involved in overseeing or performing spill containment operations will be allowed within the designated hazard areas. If necessary, the area will be roped or otherwise blocked off. Unauthorized personnel are kept clear of the spill area;
- Appropriate PPE is donned before entering the spill area;
- Appropriate spill control measures are applied during spill response;
- Whenever possible without endangerment of personnel, the spill is stopped at the source or as close to the source as possible;
- Ignition points are removed if fire or explosion hazards exist;
- Surrounding reactive materials are removed;
- Drains or drainage in the spill area are blocked or surrounded by berms to exclude the spilled waste and any materials applied to it;
- Provisions are made to contain and recover a neutralizing solution, if used;
- Small spills or leaks from a drum, tank, or pipe will require evacuation of at least Enter Distance feet in all directions to allow clean-up and to prevent employee exposure. For small spills, sorbent materials such as sand, sawdust, or commercial sorbents (see Table 10-1 above for site-specific sorbent media) are placed directly on the spill to prevent further spreading and aid in recovery;
- Spill area is sprayed with appropriate foam where the possibility of volatile emissions exists;
- If the spill results in the formation of a toxic vapor cloud, from vaporization, reaction with surrounding materials, or the outbreak of fire, further evacuation may be required;
- To dispose of spill waste, all contaminated sorbents, liquid waste, or other spill clean-up will be placed in small quantities Enter QTY pounds) in approved drums for proper storage or disposal as hazardous waste; and

12.8.3 Post Spill Evaluation

As part of the incident investigation and reporting documentation, a written spill response report shall be prepared at the conclusion of clean-up operations. The report will include, at a minimum, the following information:

- Date of spill incident;
- Cause of incident;
- Spill response actions;
- Any outside agencies involved, including their incident reports; and
- Lessons learned or suggested improvements.

The spill area is inspected to ensure the area has been satisfactorily cleaned. The use of surface and air sampling is utilized in this determination as necessary. The root cause of the spill is examined and corrective steps taken to ensure the engineering and control measures in place have performed as required. If alternative precautions or measures are needed, they are made available and implemented.

All durable equipment placed into use during clean-up activities is decontaminated for future utilization. All spill response equipment and supplies are re-stocked as required.

12.9 Fire

AECOM employees are not expected to attempt to put out fires. Stop work; notify all AECOM personnel, move upwind and contact 911 and/or emergency response at the site. If employees have been properly trained in the operation of a fire extinguisher, they may attempt to put out a small fire, provided that the following conditions are met:

- The fire must be small (i.e., smaller than a trash can) and in its early stages
- The employee must have an escape route
- The employee must be trained and know they have the right type of extinguisher
- The employee must be safe from toxic gases
- There must be no hazardous conditions that could quickly accelerate the fire (i.e., presence of chemicals, especially dry grass, etc.)
- Above all, if in doubt, the employee must not attempt to fight the fire

13. Personnel Acknowledgement

By signing below, the undersigned acknowledges that he/she has reviewed the AECOM Health and Safety Plan for the [site name] site. The undersigned also acknowledges that he/she has been instructed in the contents of this document and understands the information pertaining to the specified work, and will comply with the provisions contained therein. The employee understands that they are NOT to perform any work that they have not been adequately trained for and that they are to stop work if it is unsafe to proceed. Finally, the employee understands to notify the Site Supervisor and the Incident Hotline at 800-348-5046 for any incident, ***including ANY injury even if no first aid or medical treatment is required.***

Print Name	Signature	Organization	Date

Attachment A

Hospital and Clinic Directions/ Maps
Incident Reporting and Response Flow Chart

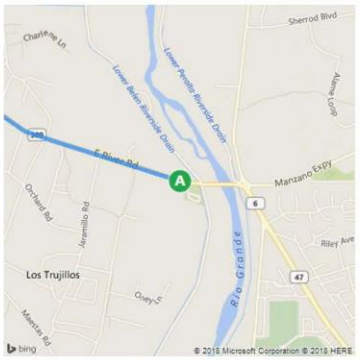
Hospital- Address, written directions, and mapped route from Site

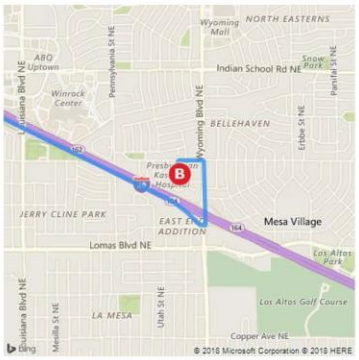
A 1536 E River Rd, Belen, NM 87002

B Presbyterian Kaseman Hospital, 8300 Constitution Ave NE, Albuquerque, NM 87110

56 min, 41.7 mi

Moderate traffic (44 min without traffic)
Via I-25 N, I-40 E





A 1536 E River Rd, Belen, NM 87002

B Presbyterian Kaseman Hospital, 8300 Con...

These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness or accuracy. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2018 HERE™.

A 1536 E River Rd, Belen, NM 87002

B Presbyterian Kaseman Hospital, 8300 Constitution Ave NE, Albuquerque, NM 87110

A 1536 E River Rd, Belen, NM 87002

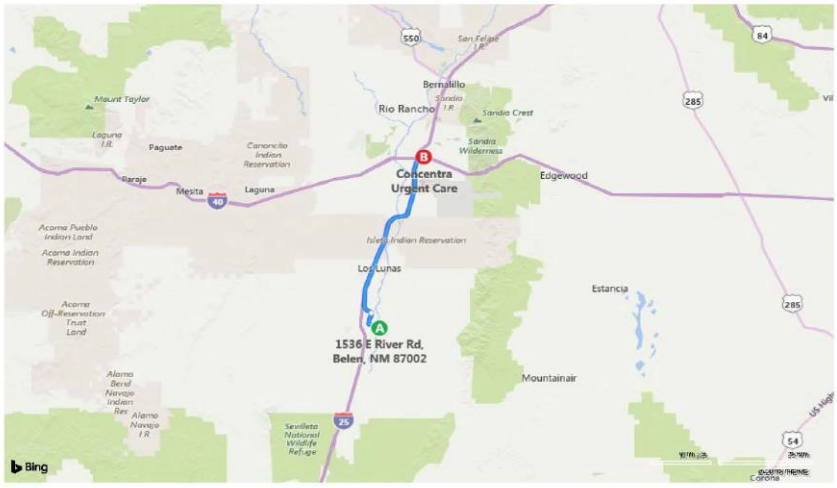
56 min, 41.7 mi

Moderate traffic (44 min without traffic)
Via I-25 N, I-40 E

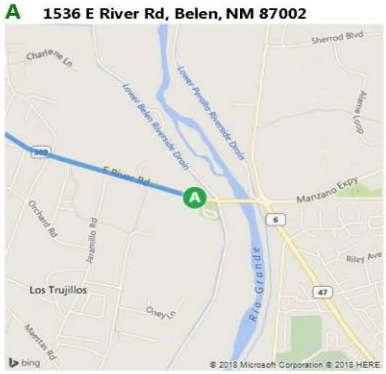
↑	1.	Depart **NM-309 / E River Rd** toward Strawberry Ln	2.0 mi
25	2.	Turn **right** onto **I-25 BL / NM-314 / N Main St**	0.4 mi
25	3.	Bear **right** onto **I-25 N BL / NM-314 N / N Main St** Circle K on the corner	0.1 mi
25	4.	Bear **right** onto **I-25 BL / NM-6 / NM-314 / N Main St**	0.9 mi
25	5.	Keep **straight** onto **I-25 N BL / NM-314 N / N Main St**	0.7 mi
25	6.	Keep **left** to stay on **I-25 N BL / NM-314 S**	1.8 mi
25	7.	Take ramp **right** for **I-25 North** toward **Albuquerque** ▲ *Construction: At Rio Bravo Blvd/Exit 220 - Construction work.* ▲ *Minor Congestion*	30.0 mi, 31 min
40	8.	Take ramp **right** for **I-40 East** toward **Santa Rosa** ▲ *Minor Congestion*	4.9 mi
↱	9.	At exit **164**, take ramp **right** for **Wyoming Blvd.** toward **Hospital**	0.2 mi
↰	10.	Turn **left** onto **Wyoming Blvd NE**	0.4 mi
↰	11.	Turn **left** onto **Constitution Ave NE** Phillips 66 on the corner	0.1 mi
↰	12.	Turn **left** onto **road**	413 ft
	13.	Arrive The last intersection is Constitution Ave NE	

B Presbyterian Kaseman Hospital

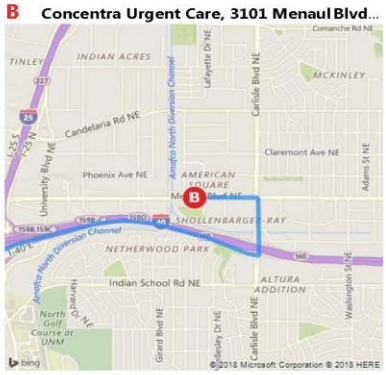
Occupational Clinic- Address, written directions, and mapped route from site



A 1536 E River Rd, Belen, NM 87002



B Concentra Urgent Care, 3101 Menaul Blvd...



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A 1536 E River Rd, Belen, NM 87002

B Concentra Urgent Care, 3101 Menaul Blvd NE Ste B, Albuquerque, NM 87107

51 min, 38.5 mi
Moderate traffic (40 min without traffic)
Via I-25 N

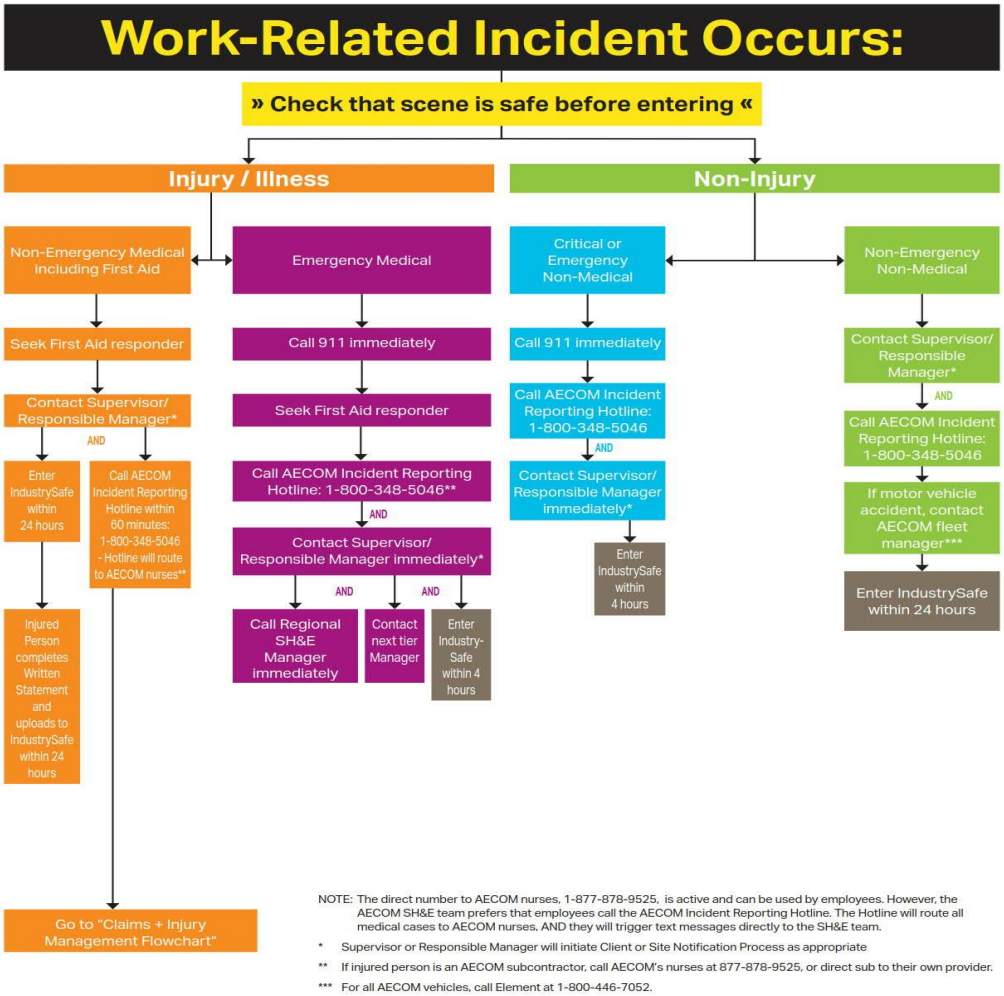
A 1536 E River Rd, Belen, NM 87002

1.	Depart **NM-309 / E River Rd** toward Strawberry Ln	2.0 mi
2.	Turn **right** onto **I-25 BL / NM-314 / N Main St**	0.4 mi
3.	Bear **right** onto **I-25 N BL / NM-314 N / N Main St** Circle K on the corner	0.1 mi
4.	Bear **right** onto **I-25 BL / NM-6 / NM-314 / N Main St**	0.9 mi
5.	Keep **straight** onto **I-25 N BL / NM-314 N / N Main St**	0.7 mi
6.	Keep **left** to stay on **I-25 N BL / NM-314 S**	1.8 mi
7.	Take ramp **right** for **I-25 North** toward **Albuquerque** ▲ *Construction: At Rio Bravo Blvd/Exit 220 - Construction work.* ▲ *Minor Congestion*	30.0 mi, 31 min
8.	Take ramp **right** for **I-40 East** toward **Santa Rosa** ▲ *Minor Congestion*	1.6 mi
9.	At exit **160**, take ramp **right** and follow signs for **Carlisle Blvd**	0.3 mi
10.	Turn **left** onto **Carlisle Blvd NE**	0.3 mi
11.	Turn **left** onto **Menaul Blvd NE** USA Gas on the corner	0.3 mi
12.	Arrive at **Menaul Blvd NE** The last intersection is Bryn Mawr Pl If you reach Richmond Dr NE, you've gone too far	

AECOM

Work-Related Incident Flowchart for Employees | *Updated October 2016*

DCS - Americas



NOTE: The direct number to AECOM nurses, 1-877-878-9525, is active and can be used by employees. However, the AECOM SH&E team prefers that employees call the AECOM Incident Reporting Hotline. The Hotline will route all medical cases to AECOM nurses, AND they will trigger text messages directly to the SH&E team.

* Supervisor or Responsible Manager will initiate Client or Site Notification Process as appropriate

** If injured person is an AECOM subcontractor, call AECOM's nurses at 877-878-9525, or direct sub to their own provider.

*** For all AECOM vehicles, call Element at 1-800-446-7052.

Updated October 2016

Attachment B

AECOM SH&E Field Applicable Procedures

Attachment B. AECOM SH&E Field Applicable Procedures

All AECOM SH&E Procedures, in their controlled copy version, are available on the internal SH&E Policy and Procedures ecosystem page.

Programmatic procedures referenced in this document (for example SH&E Training) **DO NOT** need to be printed for inclusion in this HASP. Only procedures that are needed for field activity reference and application **MUST** be printed in full and included in this section.

Copy the Field Procedure Checklist from the Physical Hazards Section 7.1 to become your table of contents for these attachments. Include only those procedures checked as applicable to this project.

Attachment C

Stretch/Flex Poster

Attachment D

Safety Data Sheets (SDSs)

Attachment E

Site Orientation

Attachment E. Site Orientation

AECOM will conduct a site safety briefing for a person's initial visit to the site. The briefing will be conducted:

- Prior to the start of work;
- For any new AECOM or subconsultant personnel; and
- At each mobilization, or whenever there is a change in task or significant change in task location.

All personnel working on the project who have received the site briefing (including the HASP review) will sign the Personal Acknowledgement located at the end of the HASP. Visitors may receive a shortened version to address the hazards specific to their visit.

The following items, at minimum, will be discussed during the site safety briefing:

- Contents of this HASP;
- The Emergency Response Plan;
- Contractor SH&E Management expectations;
- Injury management, including notification and hospital and occupational clinic locations;
- The AECOM 4-Sight program;
- Stop Work authority;
- The JSAs/ Pre-JHAs (Attachment F) for the tasks that will be performed on a given job;
- Completion of a THA each day (Attachment F);
- Types of hazards at the site and means for minimizing exposure to them;
- Instructions for new operations to be conducted, and safe work practices;
- PPE that must be used;
- Lone worker check-in procedures;
- Emergency evacuation routes, muster points, and tornado/storm shelters; and
- Location and use of emergency equipment.

These meetings must be documented and maintained in the project files.

Attachment F

Project/Task-Specific Job Safety Analysis or Pre-Job Hazard Assessments

Attachment F. Project/Task-Specific Job Safety Analysis or Pre-Job Hazard Assessments

The preparer shall download and prepare one JSA or Pre-JHA for each discrete task being performed **by AECOM** during the project (I.e. Driving, Inspection, Sample Collection, etc.). Subcontractors must prepare their own JSA/ pre-JHAs as the job experts in their tasks.

- Link to Pre-JHA form **S3AM-209-FM4**
- The AECOM electronic job safety analysis (eJSA) toolbox may also be used to find previously approved job safety analyses (JSAs)
- Client required equivalents may be used

Insert list of Pre-Job Hazard Assessments or Job Safety Analysis here. Include after this cover sheet in the final HASP.

Blank Daily THA and Daily Tailgate Forms

The preparer shall download a sufficient number of copies of the daily Task Hazard Analysis and Tailgate Meeting form* (**DCS SH&E ecosystem page**) and insert after this cover sheet in the final HASP. One copy of the THA/ Tailgate MUST be prepared at the start of each shift, and signed by all staff involved in the operation. The THA should be consulted and updated throughout the day if conditions change.