February 17, 2015

Mr. Jerry Wickham
Alameda County Environmental Health
1311 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: **Report Submittal – Revised Site Management Plan**

Site: Public Storage #CA13186
6800 Overlake Place
Newark, California

Dear Mr. Wickham:

I declare under penalty of perjury that, to the best of my knowledge, the information contained in the attached report is true and correct.

If you have any questions or need additional information, please call me at (818) 244-8080 X 1476.

Sincerely,

Jim Fitzpatrick
Senior Vice President – Real Estate Division

Enc: Antea Group's, *Revised Site Management Plan*

PUBLIC STORAGE - Real Estate Group
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REVISED SITE MANAGEMENT PLAN

Public Storage #CA13186
6800 Overlake Place
Newark, California

Alameda County Environmental Health
Case No. RO0003136
GeoTracker Global ID: T10000006057

Antea Group Project No. PUBL57819

February 16, 2015

Prepared for:
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Revised Site Management Plan

Public Storage #CA13186
6800 Overlake Place, Newark, CA
Alameda County Environmental Health Case No. RO0003136

1.0 INTRODUCTION

Antea®Group has prepared this Revised Site Management Plan (SMP) on behalf of Public Storage Northern California Newark, Inc. (Public Storage) for the property located at 6800 Overlake Place in Newark, California (**Figure 1)**. In the Phase II Environmental Site Assessment (Phase II ESA) dated September 5, 2014, Antea Group recommended that the slag containing shallow fill material be capped or removed from areas where it may be encountered by current or future surface or subsurface workers (i.e., utility corridors), or where it may be transported off site by wind or storm water. The revision has been made to address additional requirements of Alameda County Water District that slag-affected soil not be placed deeper than it currently exists on-site. This SMP therefore presents the revised excavation and soil relocation and capping procedures to be followed so that slag-affected soil will be capped and isolated from surface contact or off-site transport, while not moving it deeper than it currently exists on site.

This SMP will be used during site construction work to provide guidance on the proper handling of slag-containing materials including dust mitigation and monitoring, and proper worker health and safety protocols. The SMP includes a soil management plan, a health and safety plan, and a dust mitigation and monitoring plan, which will detail procedures for construction and grading, excavation, relocation, and dust mitigation measures, plus soil confirmation sampling procedures to document the removal of these materials from un-capped areas. The SMP also includes a post-construction monitoring plan to document the integrity of the cap surfaces and their effectiveness at preventing exposure to slag-containing material over time. The post-construction monitoring plan includes guidance on post-construction soil handling procedures in the event that unexpected subsurface work requires disturbance of slag-containing soil under the capped areas.

2.0 SITE DESCRIPTION

The site is a triangular shaped, vacant and unpaved lot located at the southeast corner of the intersection of Fircrest Street and Overlake Place in Newark, California. The Alameda County Assessor's parcel number for the site is 537 460 13 and the property size is approximately 3.06 acres. **Figure 1** depicts the general location of the subject property, **Figure 2** depicts an aerial of the subject property showing the previous soil boring locations, and **Figure 3** depicts the subject property with the proposed Public Storage development layout and soil sample lead and arsenic concentration data. The surrounding site use is commercial/industrial in the direct vicinity, and residential use approximately 550 feet to the east. Adjoining property use consists of an existing Public Storage facility to the

southeast, a commercial baking facility to the east/northeast, an industrial facility to the northwest and commercial office buildings to the southwest. A drainage canal is located on the south side of Highway 84, approximately 1,000 feet north of the subject property.

The subject property currently remains undeveloped with the exception of a landscaped berm located along the property boundaries of Overlake Place and Fircrest Street. The landscaped berm is approximately four feet above street level.

3.0 SITE HYDROGEOLOGIC CONDITIONS

During Antea Group's Phase II ESA, imported fill material was observed in the soil borings located in **Area 1** (B-1 through B-13) in the upper one to two feet. The fill is predominantly classified as sandy clay or clayey sand with gravel. Gravel observed in some borings and at the surface of the site within the top two feet of fill included slag. Soils underlying the fill material included lean clay, fat clay and silt to total depth of the boreholes (approximately 5 feet bgs).

Soil borings advanced within the landscaped berm of **Area 2** (B-14 through B-19) contained silt with sand in the upper four to five feet. Beneath the silt, lean clay, and lean clays and silts were observed in the southern and western sides of the berm (B-14 through B-17). Well-graded gravel with sand was observed below the silt material of the berm in the northern half of the landscaping area located along Overlake Place. The sand and gravel material was observed at a depth of 4.5 and 5 feet in borings B-18 and B-19 and extended to the total depth of the boreholes (approximately 7 feet bgs). This depth interval corresponds approximately to the surface soil of Area 1.

Based on the 2013 geotechnical investigation of the site by Giles Engineering Associates, Inc. (GEA), groundwater was encountered at depths ranging from 10 to 17 feet bgs, which is typical for the area according to the ACWD. However, GEA noted that historical high groundwater elevations suggested fluctuations of the groundwater table, localized zones of perched water, and rise in soil moisture content could be expected during and after the rainy season. The perched water table could rise above the 10-foot depth indicated by GEA.

4.0 SUMMARY OF SOIL IMPACTS

The following sections provide a summary of the extent of slag encountered in site soils with particular respect to lead which is the primary constituent of potential concern (COPC). Refer to Antea Group's Phase II ESA Report dated September 5, 2014 for more details regarding recent soil data. A summary of historical soil analytical results are provided as **Tables 1 & 2.**

4.1 DISTRIBUTION OF CONTAMINANTS IN SOIL

The analytical laboratory results for soil samples collected during this Phase II investigation were compared to available California regulatory screening levels to assess the potential need for remedial actions under the future planned site use as a Public Storage facility. The screening levels used included California Human Health Screening Levels (CHHSLs) established by the State Office of Environmental Health Hazard Assessment (California Environmental Protection Agency, January 2005) and Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (SFBRWCQB), (SFBRWQCB, December 2013). Due to the planned future site use as a Public Storage facility, the SFBRWQCB Direct Exposure Soil Screening Levels for Construction/Trench Workers was used for this comparison. In addition, concentrations of metals were compared to generally accepted background concentrations in California as shown on **Table 1**, as well as to a sample of slag from the former Pacific States Steel site, the suspected source of the slag material.

As shown in **Table 1**, several metals including, cadmium, chromium, copper, lead, molybdenum, and zinc, were reported in samples collected from the shallow fill material above generally accepted background levels. Arsenic was reported above the generally accepted background level in the San Francisco Bay Region of 11 mg/kg in two samples, one at a concentration of 12 mg/kg (B-7d1.0), and one at 20 mg/kg (B-6d1.0). The 95% upper confidence level calculated arsenic at the site is 8.72 mg/kg, below allowable concentrations. Most of shallow fill samples analyzed contained lead above its respective ESL for Construction/Trench Workers. A summary of the lead ESL exceedances in the complete soil sample set is provided below:

AREA 1					
Analyte	**Sample Depth (feet bgs)**	**Number of Sample Concentrations > ESLs : Total Number Samples Analyzed**	**ESL (mg/kg)**	**Minimum Concentration above ESL [Sample ID] (mg/kg)**	**Maximum Concentration above ESL [Sample ID] (mg/kg)**
Lead	1.0-1.5	10:13	320	340 [B-6d1.0]	1,400 [B-5d1.0]
	3.0	0:13		None above ESLs	None above ESLs

AREA 2					
Analyte	**Sample Depth (feet bgs)**	**Number of Sample Concentrations > ESLs : Total Number Samples Analyzed**	**ESL (mg/kg)**	**Minimum Concentration above ESL [Sample ID] (mg/kg)**	**Maximum Concentration above ESL [Sample ID] (mg/kg)**
Lead	2.0	0:6	320	None above ESLs	None above ESLs
	5.0	2:6		850 [B-18d5.0]	1,000 [B-19d5.0]
	7.0	1:3		630 [B-19d7.0]	630 [B-19d7.0]

Note: Sample ID denotes boring name and depth of sample collection, e.g. B-8d1.5 was collected at 1.5 ft. bgs from boring B-8.
No concentrations for thallium were reported above the laboratory minimum reporting limits (MRLs), however, the MRLs for samples B-4d1.0, B-5d1.0, B-10d1.0 and B-11d1.0 were 3.6 to 3.8 mg/kg, slightly above the ESL of 3.1 mg/kg.

Metals concentrations were generally highest throughout Area 1 in the one foot samples in the fill material and decreased with depth as native soil was encountered. In Area 2, metals concentrations were generally lowest in the two-foot samples collected within the landscaping soil, and increased with depth at the elevation of Area 1 in the northern half of Area 2 located along Overlake Place. Imported fill material containing elevated metals concentrations was identified at 1 to 2 feet bgs in Area 1 and at 5 to 7 feet bgs in Area 2 in borings B-18 and B-19. Considering the raised height of the landscaped berm area, metals impacts and fill material are located at the same general elevation across Areas 1 and 2 at the subject property.

5.0 PROPOSED SITE DEVELOPMENT

Public Storage proposes to construct a four-story self-storage warehouse at the site consisting of one building, associated on-site parking, landscaping, a bio-retention pond and extension of utility services. The proposal is an expansion of an existing Public Storage warehouse located south of the subject site on an adjacent parcel. The proposed building footprint is approximately 36,350 square feet.

6.0 PROPOSED REMEDIATION ACTION AND GOALS

The slag-containing shallow fill material will be capped or removed from areas where it may be encountered by current or future surface or subsurface workers (i.e., utility corridors), or where it may be transported off site by wind or stormwater. This material will remain or be relocated underneath proposed building slabs and pavement to prevent exposure to site workers, Public Storage customers and employees, as well as off-site transport by wind or stormwater. The proposed facility layout is shown on **Figure 3.**

7.0 SITE MANAGEMENT PLAN

Antea Group's Phase II ESA Report recommended the preparation of a Site Management Plan (SMP) along with a site-specific Health and Safety Plan (HASP), and a Dust Mitigation and Air Monitoring Plan (AMP) for use during site development, including capping and excavation and relocation of the affected soils. This SMP, HASP, and AMP, and Cap Monitoring Plan (CMP) includes details for construction and grading, excavation, relocation, and dust mitigation measures, plus soil confirmation sampling procedures, as necessary. Implementation of the Soil Management Plan will occur during site development activities. However, post-site development intrusive activities which have the potential to expose slag-containing soils underneath the capped areas will also follow the applicable protocols of the SMP, HASP, AMP, and CMP. If intrusive activities within the capped areas generate excess slag containing soils, those soils may be placed back beneath the capped surface. If off-site disposal is required, the material will require sampling and proper waste characterization as potentially hazardous waste.

7.1 SITE PREPARATION

7.1.1 Health and Safety Plan

Work conducted within the slag-affected areas will be conducted under a site-specific Health and Safety Plan (HASP) completed for potential exposure to metals-affected soil. Lead is the most likely chemical of potential concern (COPC) found at levels exceeding CHHSLS or ESLs. Workers who may be exposed to the COPC within slag-affected areas during the course of their work will have completed OSHA 40-hour HAZWOPER and annual refresher training (29 CFR 1910.120).

The HASP will identify chemicals and maximum concentrations present in the affected areas along with worker exposure limits, health/physical hazards, exposure monitoring requirements, personal protection requirements, training requirements, documentation procedures, and inhalation exposure thresholds. The HASP is included as **Appendix A**.

7.1.2 Pre-Field Notifications

ACEH and Alameda County Water District (ACWD) agencies will be notified at least 5 days prior to the start of excavation activities related to slag-affected soils. Included as part of Public Storage's construction activities, local utility companies will be contacted through Underground Service Alert (USA) North 811 to mark the existence of underground utilities within the proposed excavation areas.

7.1.3 Site Set-up

Prior to the start of excavation activities, the following set-up will be implemented at the site:

- Set up temporary fencing or barricades around excavation and work areas;
- Post notifications at site entrances identifying work physical/chemical/environmental hazards (including Proposition 65 warnings and personal protective equipment required) and emergency contact information;
- Establish and set up an exclusion zone for slag-containing soil movement areas;
- Establish staging area and truck/equipment entrance and exits;
- Set up real-time air monitoring stations and storm water control measures (as necessary).

7.2 EXCAVATION ACTIVITIES

7.2.1 Excavation Volume and Limits

The anticipated extents of excavation are depicted on **Figure 3.** Excavation of slag-affected soil will be limited to the northern portion of the site and the proposed bioretention pond. The maximum anticipated excavation depth

in the northern area is approximately 2 feet to remove slag-affected soil, plus an additional 3 feet within the pond area.

Slag-affected soil removed from the northern portion of the site will not be placed back into the northern portion of the site, but distributed across the central and southeastern parking areas and the proposed building footprint. The volume of slag-affected material to be removed from the northern portion and proposed bioretention pond areas is approximately 1,500 cubic yards (CY).

Additionally, the clean soil forming the landscape berm along the western portion of the property along Overlake Place (approximately 1,400 CY) will be removed down to natural grade. This removed clean soil will be placed in the northern portion of the site to return that area to design grade. The slag-containing soil present underneath this landscaping area will be capped by placing geofabric and high-visibility construction mesh over it prior to placing new clean soil and/or landscaping cobblestones to isolate it from surface contact and prevent off-site transport. Details of the capping materials and thicknesses are presented in Section 7.2.9.

Once slag-containing soil from the northern portion of the site is placed in the central and southeastern parking areas and the building footprint, approximately 500 CY yards of slag-containing material will be removed from the proposed utility corridors. This material will also be placed in the building footprint. Lastly, approximately 1,475 CY of slag-affected soil will be placed in the two parking areas from the building footing and elevator pit excavations. Clean soil will not be removed from the parking areas to achieve this volume however. Instead, these areas and the building footprint will be raised to accommodate the additional volume of soil without placing slag affected soil deeper than it currently exists.

7.2.2 Slag-Affected Soil Relocation and Capping

Based on the soil data obtained during the Phase II ESA, the upper one to two feet of site surface soils in the main, undeveloped portion of the site (Area 1) have slag-affected soils which require relocation or capping. The affected soils in the proposed northern portion of the site will be relocated to the central and southeastern parking areas and beneath the proposed building, which will be raised and then capped with asphalt or concrete. An environmental professional will observe shallow excavation activities to identify and confirm locations and depths of slag containing material.

The slag-affected soils under the landscaped berm do not require relocation as they will be capped in place. The clean material will be removed from the berm, exposing the slag-containing soil. The clean material will be relocated to the northern portion of the site. A geofabric and high-visibility construction mesh will be placed on top of the slag-containing soil in the landscaping berm, in order to prevent mixing of slag-containing and clean soils, and provide a visual barrier to potential future subsurface workers. Clean fill material will be imported to replace the clean soil removed, and placed on top of the geofabric and construction mesh. To provide adequate

cover and protection, the geofabric and high-visibility construction mesh will be covered with either 2 feet of clean soil or landscaping cobbles as listed in Section 7.2.9. .

7.2.3 Soil Relocation Methodology

Slag-affected soils from the northern portion of the site and remaining slag-affected soils within the landscaped areas will be relocated and placed under pavement or capped in place. In order to accommodate relocation or capping the following approximate excavation sequence will be utilized:

Stage	Excavation Location	Approximate Soil Volume (Cu. Yds.)
1	Remove slag-affected soils from northern portion of site and bioretention pond area and relocate to central and southeastern parking areas, and proposed building area.	1,500
2	Remove unaffected fill material from landscaped berm along Overlake Place and relocate to bioretention pond area.	1,400
2A	Place geofabric and high-visibility construction mesh on top of slag material in landscaping berm.	
3	Remove slag-affected soils from proposed utility corridors and relocate to central and southeastern parking areas and proposed building area.	500
4	Import clean backfill as needed to replace soil removed in Stages 4 and 6.	1,900
4A	Place cobbles over geofabric and high-visibility construction mesh in non-paved areas with less than two feet of clean cover (i.e. along tapered edges of landscaping berm).	500
5	Excavate footings and elevator pit from building and place in central and southeastern parking areas.	1,475
6	Pour Concrete into new footings and elevator pit excavations.	1475

In the event that slag-affected soils require off-site disposal, those soils will be tested and characterized for possible disposal as hazardous waste as described in Appendix C

7.2.4 Slag Identification

The on-site environmental personnel will identify slag material by visual inspection, looking for metallic or vesicular material that has an irregular or unnatural shape associated with melted material from a heat source. Slag material may also be slightly magnetic. On-site personnel will use a magnet to field test material to assess the presence of slag.

7.2.5 Dust Mitigation and Air Monitoring Plan

Dust control techniques will be implemented by the General Engineering Contractor at all times during the excavation, loading, and backfilling activities to prevent the formation and migration of visible dust. These techniques may include the following:

- Misting or spraying water as needed to prevent formation of dust while excavating, loading, or backfilling;
- Controlling and monitoring excavation activities to minimize the generation of dust;

- Minimizing drop heights while loading transportation vehicles;
- Covering trucks hauling soils or backfill materials, and requiring trucks to maintain adequate freeboard to minimize spills.
- Covering stockpiles with plastic sheeting;
- Sweeping site when needed to remove dust and soil from paved areas.

Air monitoring will be conducted using real-time data-logging aerosol monitors such as DataRAM to measure total dust levels. Antea Group has prepared a Dust Mitigation and Air Monitoring Plan (AMP) for use during excavation activities. Action levels based on California Department of Occupational Safety and Hazard Assessment (Cal-OSHA) guidelines and best management practices (BMPs) for construction activity are established in the AMP for managing dust emissions and airborne contaminants due to soil remediation activities. The real-time monitoring will be supplemented by the collection of continuous air samples that can be analyzed for lead and other relevant contaminants in the even a visible dust action level occurs. The AMP is included as **Appendix B**.

7.2.6 Soil Confirmation Sampling Plan

Confirmation soil samples for laboratory analyses will be collected at the final depths of the slag-containing soil excavations to confirm that slag has been removed from areas of the site that will not be capped. Confirmation samples will be collected at discrete locations from the bottom of the northern pond area, Overlake Place landscaping area (if excavated), and utility line areas for laboratory analysis. A minimum of 6 samples will be collected at approximately equal spacing from the northern and landscaping areas. A minimum of 3 samples will be collected at approximately equally spaced locations along each utility line segment, or at a minimum of 100 foot spacing. The soil samples will be submitted to a California Environmental Laboratory Accreditation Program (ELAP) certified laboratory, for lead analysis using Environmental Protection Agency (EPA) Test Method 6020/6020A.

If analytical results of the confirmation samples indicate lead is present above the commercial land use ESL for lead, additional excavation will be conducted to remove slag affected soil that may be remaining. The additional excavation will remove a minimum of 6 inches of soil over the area represented by that sample, or more if visual slag is present.

Four additional confirmation samples will be collected within the additional excavation area to document successful removal of the slag affected soil and that lead is below the commercial land use ESL for lead in the area represented by that sample.

7.2.7 Backfill Materials and Methods

Following the completion of soil excavation and confirmation sampling (if necessary), the excavation area will be backfilled and compacted as needed to meet site construction requirements. If additional soil is required to be imported, the borrow source material will be tested for COPCs following *Department of Toxic Substance Control Information Advisory, Clean Imported Fill Material* (DTSC, 2001).

7.2.8 Record Keeping

Antea Group will measure and record the limits of excavation, maintain a daily air monitoring data and record pertinent remedial construction-related information including:

- Date and description of the daily work activities.
- Documentation of sampling conducted, including drawings or sketches showing the location from which samples were collected, field notes, photos of the site activities, and COPC.
- Documentation of the location of the relocated soil.
- If necessary, for soil disposed off-site, the completed and signed waste profile, waste manifest, weight tickets, landfill disposal tickets (or other confirmation of disposal.

7.2.9 Long Term Cover Requirements

Once soil relocation activates are completed according to the excavation and placement sequence summarized in section 7.2.3, building construction will commence. The newly relocated slag affected soil will be capped by a combination of building and landscaping materials. The minimum cover requirements to cap slag affected soil are summarized in the table below:

Summary of Cap

Area (Description)	Primary Materials	Minimum Thickness (inches)
Building	Concrete slab and footings	6
Parking lots driveway and access roads	Asphalt concrete paving and aggregate base rock	6
Landscaping and Building vicinity	Concrete Sidewalks	2
Landscaping	Topsoil or non-slag affected native soil	24
Landscaping, and other areas where clean soil cover is zero to 23 hick	Geofabric and high-visibility construction mesh plus cobble stones	4

Cap materials and locations at the site are shown on **Figure 3.** The cap materials will be monitored after completion of the building in accordance with a post-construction cap monitoring plan.

8.0 POST-CONSTRUCTION CAP MONITORING PLAN

ACEH indicated it will require monitoring of the asphalt and concrete pavement (or landscaping areas if selected by Public Storage) to document the effectiveness of these barriers at preventing exposure to or migration of slag-

affected soils at the site. The post-construction cap monitoring requirements will consist of annual visual inspections of the cap areas and documentation of the annual inspections. Antea Group prepared a plan for use and implementation by on-site Public Storage staff, including annual submittal of the inspection checklists to ACEH. A copy of this plan is included as **Appendix C**.

9.0 REPORTING

Following the completion of soil relocation and capping under the completed building materials, a report will be submitted to ACEH documenting the successful completion of these soil remedial activities. The report will include a summary of the approximate final quantities of soil moved, the final depths of slag affected soil placement, and the final locations of slag affected soil. The report will also summarize the results of the soil confirmation testing and air monitoring activities conducted during site remedial activities.

Upon completion of the soil remediation activities a Covenant and Environmental Restriction appropriate for the final disposition of the site will be recorded for the property to identify potential future property owners of site conditions and limitations on subsurface intrusive work or redevelopment within slag affected soil areas. The Covenant and Environmental Restriction document will include a reference to the Post-Construction Cap Monitoring Plan.

10.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

Andrew M. Lojo, P.G.
Senior Consultant
California Registered Professional Geologist No. 6034
Antea Group

cc: GeoTracker (upload)

Figures

FIGURE 1
SITE LOCATION MAP

PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
1401006691P	NP	JH
DATE	REVIEWED BY	FILE NAME
4/23/14		CA13186

anteagroup

USGS 7.5 MINUTE TOPOGRAPHIC MAP, NEWARK QUADRANGLE (2012)

N

0 2000 FT

SCALE

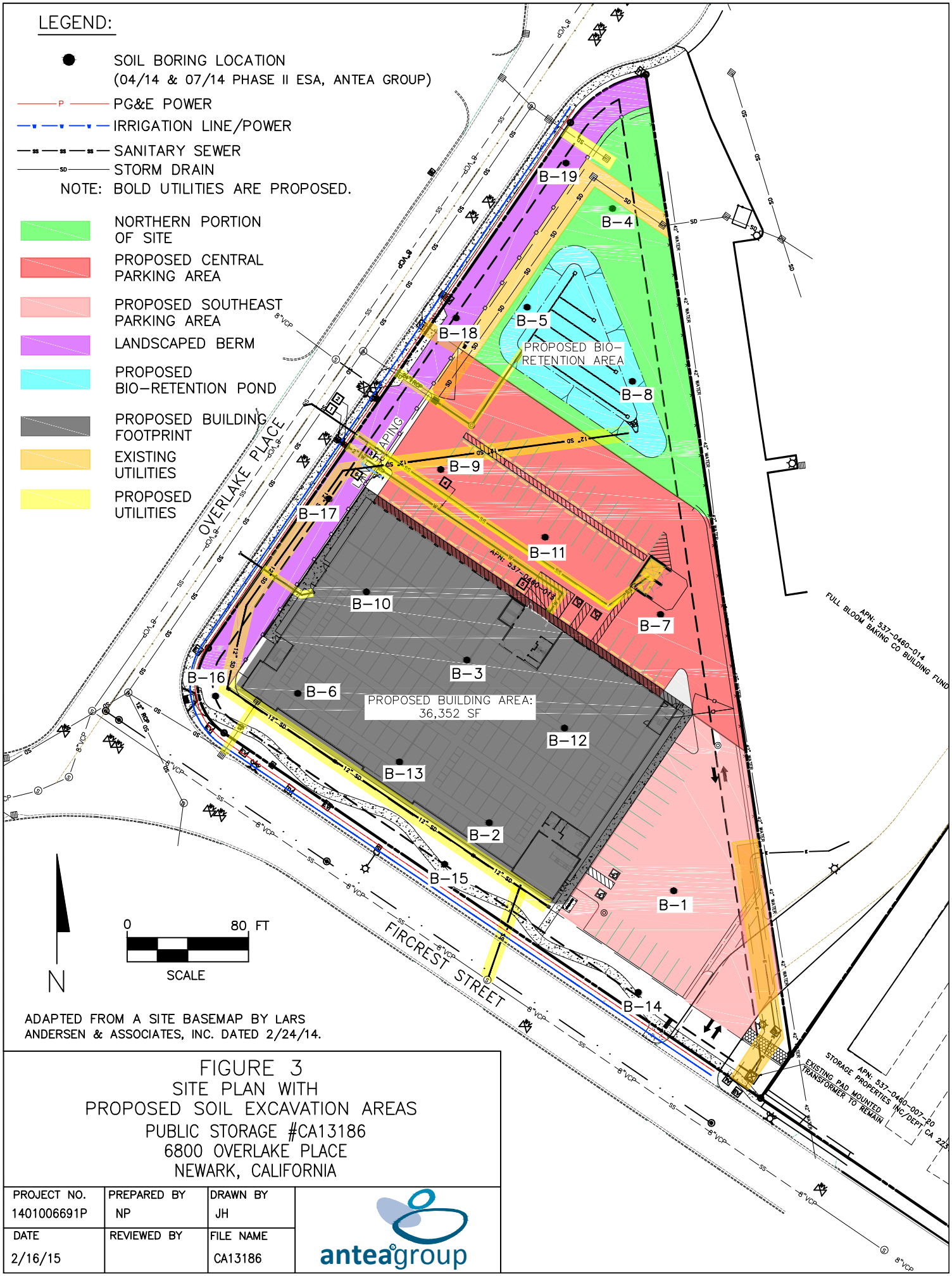
ADAPTED FROM A SITE BASEMAP BY LARS ANDERSEN & ASSOCIATES, INC. DATED 2/24/14.

FIGURE 2
AERIAL SITE MAP

PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
1401006691P	NP	DR
DATE	REVIEWED BY	FILE NAME
9/8/14		CA13186

anteagroup



ADAPTED FROM A SITE BASEMAP BY LARS ANDERSEN & ASSOCIATES, INC. DATED 2/24/14.

FIGURE 3
SITE PLAN WITH PROPOSED SOIL EXCAVATION AREAS
PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
1401006691P	NP	JH	
DATE	REVIEWED BY	FILE NAME	
2/16/15		CA13186	

anteagroup

Tables

Table 1
ANALYTICAL RESULTS FOR METALS IN SOIL SAMPLES
6800 Overlake Place
Newark, CA 94560

CONCENTRATIONS[1] [milligrams per kilogram (mg/kg)]																		
SFBRWQCB Industrial ESLs[2] (Direct Exposure)			*120*	*10*	*61,000*	*180*	*110*	*460,000*	*49*	*12,000*	*320*	*27*	*1,500*	*6,100*	*1,500*	*1,500*	*3.1*	*1,500*	*93,000*
Background Reference Concentrations[3]			*0.1-9.6*	*0.6-11*	*133-1400*	*0.25-2.7*	*0.05-1.7*	*23-1579*	*2.7-46.9*	*9.1-96.4*	*14.3-107.9*	*0.1-0.9*	*0.1-9.6*	*9-509*	*0.015-0.43*	*0.1-8.3*	*5.3-36.2*	*39-288*	*88-236*
Background Reference Concentrations[4,5]			*<1-2.6*	*11*	*70-5,000*	*<1-15*	*NA*	*3-2,000*	*<3-50*	*2-300*	*<10-700*	*0.03->10*	*<3-7*	*<5-700*	*<0.1-4.3*	*NA*	*2.4-31*	*7-500*	*10-2,100*
CHHSLs[6]			*380*	*0.24*	*63,000*	*1,700*	*7.5*	*100,000 (Cr III)*	*3,200*	*38,000*	*320*	*180*	*4,800*	*16,000*	*4,800*	*4,800*	*63*	*6,700*	*100,000*
Sample ID	Sample Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
B-1d1.0	1.0	04/01/14	<0.75	**7.8**	**350**	**0.47**	**6.7**	**780**	**11**	**130**	**510**	**0.080**	**13**	**110**	<0.75	**1.1**	<0.75	**64**	**4,800**
B-1d3.0	3.0	04/01/14	<0.75	**7.6**	**220**	**0.52**	<0.50	**85**	**14**	**29**	**10**	<0.050	**1.2**	**93**	<0.75	<0.25	<0.75	**46**	**75**
B-2d1.0	1.0	04/01/14	<0.75	**7.2**	**220**	**0.35**	**3.8**	**400**	**9.9**	**120**	**300**	**0.052**	**5.8**	**63**	<0.75	**0.63**	<0.75	**52**	**1,800**
B-2d3.0	3.0	04/01/14	<0.75	**7.8**	**230**	**0.49**	**2.3**	**190**	**14**	**70**	**150**	<0.050	**2.9**	**85**	<0.75	**0.40**	<0.75	**52**	**1,100**
B-3d1.5	1.5	04/02/14	**0.98**	**11**	**260**	**0.37**	**6.5**	**490**	**12**	**260**	**420**	**0.074**	**12**	**100**	<0.75	**0.96**	<0.75	**56**	**3,200**
B-3d3.0	3.0	04/02/14	<0.75	**8.0**	**200**	**0.54**	<0.50	**83**	**13**	**30**	**10**	<0.050	**0.40**	**90**	<0.75	<0.25	<0.75	**47**	**73**
B-4d1.0	1.0	04/02/14	<0.75	**9.5**	**430**	**0.33**	**8.3**	**1,100**	**7.2**	**210**	**700**	**0.062**	**17**	**70**	<0.75	<1.2	<3.7	**65**	**4,600**
B-4d3.0	3.0	04/02/14	<0.75	**7.2**	**470**	**0.49**	**3.2**	**380**	**11**	**110**	**250**	**0.068**	**4.8**	**77**	<0.75	**0.55**	<0.75	**55**	**1,400**
B-5d1.0	1.0	04/02/14	<0.75	**9.8**	**510**	**0.37**	**19**	**1,300**	**6.0**	**260**	**1,400**	**0.094**	**23**	**66**	<3.8	**1.8**	<3.8	**69**	**8,100**
B-5d3.0	3.0	04/02/14	<0.75	**8.0**	**350**	**0.54**	<0.50	**88**	**13**	**30**	**11**	<0.050	**0.64**	**91**	<0.75	<0.25	<0.75	**48**	**77**
B-6d1.0	1.0	04/02/14	<0.75	**20**	**350**	**0.51**	**5.0**	**290**	**6.4**	**71**	**340**	**0.084**	**7.0**	**44**	**0.86**	**0.68**	<0.75	**50**	**2,100**
B-6d3.0	3.0	04/02/14	<0.75	**8.3**	**270**	**0.56**	<0.50	**92**	**14**	**32**	**12**	<0.050	**0.56**	**93**	<0.75	<0.25	<0.75	**49**	**82**
B-7-d1.0	1.0	04/02/14	<0.75	**12**	**400**	**0.53**	**12**	**630**	**9.9**	**230**	**750**	**0.14**	**7.8**	**73**	<0.75	**1.5**	<1.5	**65**	**5,200**
B-7d3.0	3.0	04/02/14	<0.75	**8.2**	**250**	**0.57**	<0.50	**89**	**15**	**33**	**13**	<0.050	**1.0**	**97**	<0.75	<0.25	<0.75	**50**	**87**
B-8d1.5	1.5	04/02/14	<0.75	**5.4**	**170**	**0.54**	<0.50	**88**	**14**	**34**	**22**	<0.050	**0.44**	**82**	<0.75	<0.25	<0.75	**49**	**120**
B-8d3.0	3.0	04/02/14	<0.75	**8.0**	**260**	**0.54**	<0.50	**91**	**12**	**31**	**14**	<0.050	**0.40**	**92**	<0.75	<0.25	<0.75	**49**	**110**
B-9d1.5	1.5	04/02/14	<0.75	**8.1**	**240**	**0.55**	**2.0**	**220**	**14**	**53**	**160**	<0.050	**1.8**	**88**	<0.75	**0.30**	<0.75	**53**	**1,200**
B-9d3.0	3.0	04/02/14	<0.75	**8.0**	**220**	**0.57**	<0.50	**88**	**15**	**32**	**17**	**0.074**	**0.46**	**95**	<0.75	<0.25	<0.75	**49**	**130**
B-10d1.0	1.0	04/02/14	<3.8	**8.4**	**500**	**1.7**	**9.9**	**2,200**	**3.9**	**340**	**640**	**0.20**	**37**	**50**	<0.75	**1.6**	<3.8	**84**	**5,600**
B-10d3.0	3.0	04/02/14	<0.75	**7.6**	**230**	**0.52**	<0.50	**110**	**12**	**33**	**39**	<0.050	**0.87**	**87**	<0.75	<0.25	<0.75	**46**	**200**
B-11d1.0	1.0	04/02/14	<0.75	**8.3**	**440**	**0.43**	**9.8**	**1,200**	**8.1**	**230**	**680**	<0.050	**14**	**68**	<0.75	<1.2	<3.6	**61**	**4,100**
B-11d3.0	3.0	04/02/14	**1.2**	**7.4**	**220**	**0.47**	<0.50	**83**	**13**	**23**	**14**	<0.050	**0.61**	**89**	<0.75	<0.25	<0.75	**42**	**95**
B-12d1.0	1.0	04/02/14	<0.75	**8.3**	**260**	**0.53**	**4.9**	**510**	**9.8**	**110**	**470**	**0.11**	**14**	**72**	<0.75	**0.69**	<0.75	**60**	**2,500**
B-12d3.0	3.0	04/02/14	<0.75	**7.7**	**210**	**0.48**	<0.50	**85**	**13**	**33**	**27**	<0.050	**0.87**	**91**	<0.75	<0.25	<0.75	**43**	**180**
B-13d1.0	1.0	04/02/14	<1.5	**13**	**370**	**0.40**	**20**	**730**	**7.7**	**310**	**1,300**	**0.32**	**19**	**79**	<1.5	**2.9**	<1.5	**67**	**9,600**
B-13d3.0	3.0	04/02/14	<0.75	**8.0**	**160**	**0.53**	<0.50	**82**	**15**	**32**	**8.8**	<0.050	**0.82**	**98**	<0.75	<0.25	<0.75	**45**	**60**
B-14d2.0[7]	2.0	07/22/14	<0.75	**6.8**	**190**	**0.37**	<0.50	**78**	**12**	**32**	**14**	<0.050	**0.73**	**88**	<0.75	<0.25	<0.75	**37**	**94**
B-14d5.0[7]	5.0	07/22/14	<0.75	**7.4**	**220**	**0.44**	<0.50	**70**	**12**	**33**	**25**	<0.050	**1.5**	**74**	<0.75	<0.25	<0.75	**42**	**180**
B-15d2.0[7]	2.0	07/22/14	<0.75	**7.4**	**190**	**0.38**	<0.50	**78**	**12**	**32**	**18**	**0.27**	**0.43**	**89**	<0.75	<0.25	<0.75	**38**	**150**
B-15d5.0[7]	5.0	07/22/14	<0.75	**8.0**	**210**	**0.43**	<0.50	**79**	**12**	**36**	**35**	<0.050	**1.7**	**74**	<0.75	<0.25	<0.75	**41**	**190**
B-16d2.0[7]	2.0	07/22/14	<0.75	**7.4**	**200**	**0.43**	<0.50	**82**	**14**	**35**	**13**	**0.12**	**0.57**	**86**	<0.75	<0.25	<0.75	**48**	**100**
B-16d5.0[7]	5.0	07/22/14	<0.75	**9.0**	**250**	**0.49**	<0.50	**89**	**13**	**35**	**18**	**0.094**	**0.52**	**90**	<0.75	<0.25	<0.75	**45**	**130**
B-17d2.0[7]	2.0	07/22/14	<0.75	**6.1**	**180**	**0.34**	<0.50	**68**	**12**	**25**	**7.4**	<0.050	**0.36**	**78**	<0.75	<0.25	<0.75	**37**	**53**
B-17d5.0[7]	5.0	07/22/14	<0.75	**7.2**	**270**	**0.34**	**1.3**	**400**	**9.9**	**120**	**150**	<0.050	**5.0**	**73**	<0.75	**0.33**	<0.75	**45**	**830**
B-17d7.0[7]	7.0	07/22/14	<0.75	**7.6**	**210**	**0.36**	<0.50	**76**	**12**	**44**	**17**	<0.050	**0.76**	**83**	<0.75	<0.25	<0.75	**39**	**110**
B-18d2.0[7]	2.0	07/22/14	<0.75	**5.4**	**370**	**0.46**	**0.96**	**210**	**20**	**94**	**94**	<0.050	**2.1**	**79**	<0.75	<0.25	<0.75	**65**	**600**
B-18d5.0[7]	5.0	07/22/14	<0.75	**8.9**	**470**	**0.52**	**11**	**790**	**9.2**	**370**	**850**	**0.19**	**17**	**90**	<1.4	**1.8**	<1.4	**60**	**5000**
B-18d7.0[7]	7.0	07/22/14	<0.75	**6.6**	**220**	**0.53**	<0.50	**120**	**14**	**32**	**14**	**0.15**	**0.43**	**86**	<0.75	<0.25	<0.75	**47**	**110**
B-19d2.0[7]	2.0	07/22/14	<0.75	**7.4**	**210**	**0.43**	<0.50	**78**	**13**	**35**	**9.1**	<0.050	**0.48**	**91**	<0.75	<0.25	<0.75	**44**	**69**
B-19d5.0[7]	5.0	07/22/14	**1.2**	**9.5**	**510**	**0.32**	**9.0**	**780**	**9.9**	**320**	**1000**	**0.054**	**19**	**100**	<1.5	**1.2**	<1.5	**59**	**5500**
B-19d7.0[7]	7.0	07/22/14	<0.75	**9.6**	**420**	**0.49**	**5.3**	**880**	**8.8**	**210**	**630**	<0.050	**13**	**66**	<1.4	**1.1**	<1.4	**69**	**2900**

Notes:

Concentrations above the labortory minimum reporting limits (MRLs) appear in BOLD text.

NR - No reference level

NA - Not applicable or not analyzed

1. Metals analyzed by EPA Method 6010B, except mercury, which was analyzed by EPA Method 7471A.
2. San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESLs) dated December 2013 - Direct Exposure Soil Screening Levels for Construction/Trench Worker Exposure Scenario.
3. Mean background soil concentration from *Background Concentrations of Trace and Major Elements in California Soils* , Kearney Foundation of Soil Science - Division of Agriculture and Natural Resources, University of California, March 1996.
4. Mean background soil concentrations from *Element Concentrations in Soils and Other Surficial Materials of the Contrerminous United States* , Shacklette and Boerngen, USGS, 1984 for the Western United States, west of 96th meridian.
5. Upper background estimate for undifferentiated urbanized flatland soils in the San Francisco Bay region from Duvergé, Dylan J., *Establishing Background Arsenic In Soil Of The Urbanized San Francisco Bay Region* , December 2011.
6. California Human Health Screening Levels (CHHSLs) dated January 2005 from *Table 1 - Soil and Soil Gas Screening Numbers for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion, and Dermal Absorption.*
7. Depths of soil borings are approximatley 4 feet higher the depths of other borings due to the elevation of the landscaping berm.

Table 2
ANALYTICAL RESULTS FOR METALS IN SOIL SAMPLES
6800 Overlake Place
Newark, CA 94560

CONCENTRATIONS[1] [milligrams per kilogram (mg/kg)]																
SFBRWQCB Industrial ESLs[2] (Direct Exposure)			*0.87*	*12*	*70*	*50*	*50*	*0.93*	*0.0013[A]*		*NR*	*64*	*NR*	*NR*	*3.6*	*12*
CHHSLs[3]			*0.13*	*1.7*	*9*	*6.3*	*6.3*	*0.13*	*NR*	*NR*	*NR*	*230*	*NR*	*NR*	*0.52*	*1.8*
Sample ID	Sample Depth (feet)	Sample Date	Aldrin	Chlordane	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Toxaphene
B-1d1.0	1.0	04/01/14	<1-2.6	<0.10-97	70-5,000	**<1-15**	<0.0050	3-2,000	<3-50	2-300	<10-700	0.03->10	<3-7	<5-700	<0.1-4.3	<0.099
B-1d3.0	3.0	04/01/14	<0.0051	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.100
B-2d1.0	1.0	04/01/14	<0.0050	<0.050	<0.0050	**0.018**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.099
B-2d3.0	3.0	04/01/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-3d1.5	1.5	04/02/14	<0.0051	<0.051	<0.0051	**0.016**	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.100
B-3d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.099
B-4d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	**0.020**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.099
B-4d3.0	3.0	04/02/14	<0.0051	<0.051	<0.0051	**0.0052**	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.100
B-5d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-5d3.0	3.0	04/02/14	<0.0051	<0.051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.100
B-6d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.099
B-6d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-7-d1.0	1.0	04/02/14	<0.0050	<0.050	**0.0075**	**0.012**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-7d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-8d1.5	1.5	04/02/14	<0.0050	<0.050	**0.019**	**0.250**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-8d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-9d1.5	1.5	04/02/14	<0.0050	<0.050	<0.0050	**0.039**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-9d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-10d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	**0.0056**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-10d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-11d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	**0.029**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-11d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-12d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	**0.049**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-12d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-13d1.0	1.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100
B-13d3.0	3.0	04/02/14	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.100

Notes:

Concentrations above the labortory minimum reporting limits (MRLs) appear in BOLD text.

NR - No reference level

NA - Not applicable or not analyzed

DDD - dichlorodiphenyldichloroethane

DDE - dichlorodiphenyldichloroethylene

DDT - dichlorodiphenyltrichloroethane

1. Organochlorine pesticides (OCPs) analyzed by EPA Method 8081A. Additional OCPs were analyzed, but results were not tabulated herein; refer to the laboratory analytical report for complete results.

2. San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESLs) dated December 2013 - Direct Exposure Soil Screening Levels for Construction/Trench Worker Exposure Scenario.

3. California Human Health Screening Levels (CHHSLs) dated January 2005 from *Table 1 - Soil and Soil Gas Screening Numbers for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion, and Dermal Absorption.*

A. The ESL listed is for Endosulfan, with no distinction made between Endosulfan I and Endosulfan II.

Appendix A

Health and Safety Plan

Health, Safety, Security & Environment

Site Health and Safety Plan

Project Number:	
Project Name:	**Public Storage #CA13186**
Address:	**6800 Overlake Place**
City, State	**Newark, California**

Prepared By:	**Antea Group**
Address:	**505 14th Street, Suite 900**
City, State, Zip:	**Oakland, California, 94612**

Telephone:	**800.477.7411**	**Fax:**	**408.318.6200**

Updated: **December 08, 2014**

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APPENDICES

FIGURES

SITE HEALTH AND SAFETY PLAN

Work-related injuries and illnesses are preventable and there is a goal of zero work related injuries and illnesses for this project. This plan outlines the processes and procedures that the project team will employ towards achieving this goal.

- The Project Manager or Site Safety Officer (SSO) will hold daily on-site safety meetings ***prior to the start of field work*** to review site safety concerns, procedures, review key elements of the Site Health and Safety Plan (HASP) and Job Safety Analyses (JSAs) with members of the field crew, including on-site personnel and subcontractors. Other site safety meetings will be held as needed. Subcontractor personnel must participate in safety discussions. See attached tailgate meeting checklist and guidance document for details (Appendix A).
- Field team members who may be exposed to slag affected soil impacts during the course of their work, shall have completed OSHA 40-hour HAZWOPER and annual refresher training (29 CFR 1910.120). ***Documentation of training shall be readily available***.
- Each worker must review, sign and date the HASP and the Acknowledgement Agreement at the end of this document. Each subcontractor employee and visitor must review the HASP and sign, date, and describe their affiliation on the Subcontractor Acknowledgement Agreement at the end of this document.
- The signed HASP is kept in the field and readily available for duration of field work and returned to the project file upon completion of field activities.
- The HASP shall be revised or rewritten if site activities are changed significantly, if areas of differing hazard are involved, or if information about contaminants and hazards changes. Changing conditions may justify either increasing or decreasing HASP restrictions and action levels, depending upon the additional information generated.
- **STOP WORK AUTHORITY—ALL WORKERS HAVE THE AUTHORITY AND RESPONSIBILITY TO STOP ANY WORK, OR REFUSE TO DO WORK, THAT THEY FEEL IS UNSAFE.**

1.0 GENERAL INFORMATION

Contractor:		Site Owner:	
Site Name:	Public Storage #CA13186	Site Number:	
Site Address:	6800 Overlake Place, Newark, CA		
Project Manager:			
Plan Prepared by:	Antea Group	Date:	December 08, 2014
Approved by:		Date:	
Revised by:		Date:	
Revision Approved by:		Date:	

2.0 EMERGENCY CONTINGENCY PLAN

2.1 Local Emergency Telephone Numbers

Can 911 be used at this site? Yes [X] No [ ] If yes, be certain it is activated and enhanced.

Since cellular telephones may not reach a local 911 operator, also supply the following information. (provide area code)

Ambulance	911	Fire Department	510.578.4218
Hospital Emergency Room	510.608.6174	Police Department	510. 578.4000
Poison Control Center	800.222.1222	HazMat Response Unit	510.578.4218
(List utility companies as appropriate)			

2.2 Hospital Routes

INCLUDE A MAP WITH HIGHLIGHTED EMERGENCY HOSPITAL ROUTE(S) at the end of the HASP.

Emergency Hospital* Name: Washington Hospital Healthcare System Phone number: 510.791.1111

Hospital Address: 2000 Mowry Ave, Fremont, CA 94538

Hospital Directions:

Head southwest on Overlake Pl toward Fircrest St.
Turn Left on Fircrest St.
Take the 1st left onto Jarvis Ave.
Turn Left onto Newark Blvd
Turn right onto the California 84 E ramp
Merge onto CA-84 E
Continue onto Decoto Rd.
Turn right onto Paseo Padre Pkwy
Turn left onto Mowry Ave.
*Destination will be on the right.

* **Hospital should be notified immediately if an injury occurs which requires medical attention.**

Estimated driving distance: 6.3 Miles Estimated driving time: 13 Minutes

Does hospital accept chemically contaminated patients? Yes [ ] No [ ]

2.3 Evacuation Routes

Identify prevailing wind direction, if known. Evacuation route and meeting location must be upwind or crosswind):

PRIMARY EVACUATION ROUTE AND MEETING LOCATION:

SECONDARY EVACUATION ROUTE AND MEETING LOCATION:

2.4 Emergency Contacts

PHONE NUMBERS (provide area codes)			
	Name or Description	**Work**	**24-hr. Emergency**
Contractor/Consultant			
Project Manager:			
Site Safety Officer:			
Foreman:			
Environmental Professional:			
Public Storage			
Project Manager:			
Site Contact:			
Site Owner:			
Regulatory Agency			
Applicable Regulatory Agency:	Alameda County Environmental Health (ACEH) – Jerry Wickham (Case Worker)	(510) 567-6791	
	Alameda County Water District (ACWD) – Eileen Chen (Permits)	(510) 668-4473	

2.5 Reporting Procedures and First Aid

Call emergency services (911) ASAP if situation is an emergency, i.e. workers or the public are in immediate peril.

Report all accidents, injuries, and illnesses IMMEDIATELY to the contractor/consultant project manager and to Public Storage's project manager. Report all NEAR MISSES as soon as reasonably possible (no later than 24 hrs after the event). If necessary, use the attached reporting form to capture facts and details immediately while in the field. See Appendix B for reporting form.

2.5.1 First Aid Equipment

- Standard first aid kit/CPR mask
- Portable eye wash

2.5.2 First Aid Procedures

(if an emergency, call 911)

Ingestion: Follow instructions from Poison Control Center or the MSDS. Contact contractor's medical case management service if available and as necessary.

Inhalation: Move victim to fresh air. Contact contractor's medical case management service if available and as necessary.

Dermal Exposure: Remove contaminated clothing. Wash thoroughly with soap and water. Contact contractor's medical case management service if available and as necessary.

A first aid kit and portable eyewash shall be available on-site. If a worker suffers a chemical splash in the eye, flush the eye for 15 minutes and arrange for off-site medical treatment immediately. Workers will also be instructed to thoroughly wash with soap and water any unprotected skin that comes in direct contact with contaminated soil or water. Contact contractor's medical case management service if available and as necessary.

Trained workers who choose to provide CPR or First Aid must use Universal Precautions to control possible exposure to blood borne and infectious agents.

2.5.3 Site Emergencies

In the event of a fire or explosion, or other imminently dangerous situation (e.g. rupturing a natural gas line), evacuate the site immediately and call the appropriate emergency phone numbers listed in Section 2.1. Call the contractor and Public Storage project managers and inform him/her of the situation as soon as possible.

If there is a surface release of a chemical, call the local fire department or hazardous materials response (HAZMAT) unit. Phone numbers are listed in Section 2.1. Any release of material remaining after the emergency response will be addressed once the area is deemed safe by emergency responders.

a) Small Spills and Releases

Drums containing waste or recovered liquid must be in sound condition (new or reconditioned drums) with lid that seals and can be tightened in place. If possible, drums should be placed on an impermeable surface in a secure location prior to the environmental professional team leaving the site.

For areas where small spills or leaks may occur, suitable quantities of absorbent materials (pads, socks, floor dry, etc.) and salvage drums or containers must be available. Drums and containers used during spill clean-up shall meet the appropriate regulations (DOT, OSHA and EPA) for the wastes that they contain. Wastes must be properly characterized for disposal.

2.6 Site Resources

If no, identify closest available resource with directions.

Water supply available on site:	Yes		No	X	Bathrooms available on site:	Yes		No	X
Telephone available on site:	Yes		No	X	Electricity available on site:	Yes		No	X
Other resources available on site:	Yes		No	X	If "yes", identify:				

2.7 Project HSSE Team

Team Members (list)	
Project Manager:	
Public Information Contact:	
On-site Personnel:	
Site Safety Officer:	

PROJECT TEAM OSHA TRAINING RECORDS
(DOCUMENTATION MUST BE AVAILABLE FROM ON-SITE PERSONNEL UPON REQUEST)

Name	40 Hr Training Date	8-Hr Refresher Date	Site Supervisor Training Date

All workers who have the potential to be exposed to slag affected soil impacts must have up-to-date HAZWOPER training. See Section 11 for minimum required subcontractor training.

2.8 Perimeter Establishment

Map/Sketch attached:	**Yes**	x	**No**		**Site secured:**	**Yes**		**No**	x
Perimeter identified:	**Yes**	x	**No**		**Zone(s) of Contamination identified:**	**Yes**	x	**No**	

2.9 Work Zones

An exclusion zone will be identified for each site or site activity. The exclusion zone will be clearly marked with yellow **CAUTION** tape, barricades and\or cones (recommended cone height – 42 inches), as needed. A contamination reduction zone and support zone will be established for any site with site contaminant levels that pose a health threat to site workers or the public. No person will be allowed in the exclusion zone or contamination reduction zone without approval from the Site Safety Officer.

2.10 Site Security

Site security must be determined on a site-specific basis. The need for additional personnel, on-site security guards, fencing, etc. should be discussed with the client site manager, or other members of management. Equipment stored overnight will be locked and secured to prevent vandalism and protect the public. A description of the additional safety requirements should be listed below:

LIST SITE SECURITY MEASURES:

When work scheduling requires that an excavation be left open overnight, security fencing will be erected to restrict access to the site or work zones described in Section 2.9.

2.11 Site Map

Attach a site map to the "Figures" section at the end of the Site Health and Safety Plan. The Site Map can also to be used to outline Traffic Control (see Section 9).

3.0 SITE CHARACTERIZATION

A. Summary of Previous Site Investigation(s): Phase I and Phase II ESAs were completed by Antea Group in 2014. Nineteen soil borings were advanced at the site and analyzed for contaminants of potential concern. Slag impacted fill material was identified in the upper 2 feet bgs of the flat portion of the site and between 5-7 feet bgs in the berm along Overlake Place. Lead and arsenic are the primary constituents reported about CHHSLs and ESLs, however, arsenic is within regional background concentrations

B. Source of Previous Site Investigation Information: Phase I Environmental Site Assessment Report by Antea Group dated August 19, 2014. Phase II Environmental Site Assessment Report by Antea Group dated September 5, 2014. Site Management Plan with Soil Management Plan, Air Monitoring Plan and Post-Construction Cap Monitoring Plan dated November 2014.

C. General Facility Description:

Gasoline Service Station [ ] Refinery [ ] Bulk Terminal [ ] Other: **Vacant Parcel**

Description: Active [ ] Years has the site been operating: [ ] Closed/Abandoned [ ]

Current property use (operations on-site, products, raw materials used, etc.): Vacant lot.

Was the site previously used for industrial purposes: Yes [ ] No [X]

Describe previous site uses:

Surface cover on-site includes:

[X]	Soil/bare ground	[ ]	Clay caps	[ ]	Plastic cover
[X]	Grass	[X]	Paving/asphalt	[ ]	Water bodies
[ ]	Woods	[ ]	Swamp	[ ]	Brush/scrub
[ ]	Buildings	[ ]	Unpaved roads	[ ]	Other

Approximate site surface area: ____ sq. ft. or **3.06** **acres**

Percentage of surface area: paved 1 % bare soil 89 %

vegetated 10 % under water ____ %

Potential for dust generation on-site: High [ ] Medium [X] Low [ ]

Any site access restrictions: Yes [ ] No [X] Please list:

Fenced/locked [X] Posting (signs) [X] Security guards [ ]

Evidence of public access to the site? Yes [X] No [ ]

If "yes," describe:

D. Regulatory Contacts

Are regulatory agencies involved with the site (Y/N)? Federal? [ ] State? [ ] Local? [Y]

Name	Agency	Phone (incl. area code)
Jerry Wickham (Case Worker)	Alameda County Environmental Health	(510) 567-6791
Eileen Chen (Permitting)	Alameda County Water District	(510) 668-4473

4.0 CONTAMINANT CHARACTERIZATION

4.1 Waste/Contaminant Type(s)

Characteristic(s):

[ ]	Liquid	[X]	Soil	[ ]	Solid	[ ]	Sludge	[ ]	Gas
[ ]	Corrosive	[ ]	Ignitable	[ ]	Radioactive	[ ]	Explosive	[ ]	Flammable
[ ]	Volatile	[ ]	Toxic	[ ]	Reactive	[ ]	Unknown	[ ]	Other

4.2 Contaminant

Type	Date	Chemical	Quantity	Impacted Media*
Slag-Impacted Fill		Lead		Soil

(*air, surface water, soil, or ground water)

Free Product: Yes [ ] No [x] Dissolved: Yes [ ] No [x]

Have removal actions occurred? Yes [ ] No [X]

If "yes," describe: Slag-impacted fill soils at the site will be capped beneath building and asphalted/concreted surfaces during development of Public Storage's new facility onsite in 2015.

Is there evidence that contaminants present could cause vapor problems in structures on-site?

Yes [ ] No [x] If "yes," is building mechanically ventilated? Yes [ ] No [x]

Exhaust Ventilation: _____ General Building Ventilation: _____

4.3 Chemicals/Waste Present On-site (including petroleum products)

		How Many?	Size?	Chemical?
[ ]	Drums	0		
[ ]	Tanks	0		
[ ]	Vats	0		
[ ]	Surface impoundments	0		
[ ]	Pits/landfills	0		
[ ]	Other			

Identify all chemical products that will used or stored on site during construction activities:

Material Safety Data Sheets (MSDS) are **required** for site chemicals.
Please indicate where MSDS can be found for this site:
(Attach in Appendix C)

[ ] MSDS Log/Binder (In Field)

[ ] Attached (Additional Info. Optional)

5.0 HAZARD EVALUATION

Identify all chemicals that are present or are suspected of being present on site and list their maximum concentrations in soil/water. Attach MSDS for each chemical of concern in Appendix C.

Chemical Name	TLV/*PEL*	**Maximum Concentration in Soil	*Maximum Concentration in Water	Health Hazards/ Comments
Lead	0.05mg/m^3	1,400 mg/kg	n/a	Carcinogen, neurotoxin

(*P*) = results pending; (NA) = not analyzed; **For "Free Product/LNAPL use the soluble limit at STP.**

**Most resent results for each constituent for each well.*

*** Excludes soil results that have been verified by more recent borings to be unrepresentative of soil conditions*

Potential Hazards (check boxes that apply to the site):

	corroded containers		open lagoons		underground tanks		air stack emissions
	overhead electric lines		visible leachate		surface tanks		visible on-site releases
x	visible soil contamination*		odors		observed tanks		visible off-site releases
	observed free product	x	dust		confined spaces		visible on-site erosion
x	underground utilities		open pits		excess debris		on-site surface water contamination
	building contamination		no hazards		high traffic issues		off-site surface water contamination

List Other *Visible soil contamination = slag

6.0 PERSONAL PROTECTION & MONITORING EQUIPMENT GUIDELINES

6.1 Personal Protection

Level of Protection: B [ ] C [X] D [X] List any modifications: none

1. **Personnel who have the potential to be exposed to slag containing soil must wear: long pants, sleeved shirt (short sleeves are acceptable), hard hat, high visibility traffic safety vests, safety glasses and safety shoes. Personnel may need to wear additional or more protective eye, ear and hand PPE appropriate for their work tasks.**

2. Nitrile gloves and tyvek suits should be worn if contact with contaminated or soil is likely.

3. Hearing protection must be worn if noise levels prevent normal conversation at a distance of three feet, or anytime noise levels are measured to be over 85 dB.

4. No smoking, eating, or drinking is allowed in the exclusion or contamination reduction zones. Smoking is only allowed in areas pre-approved by the contractor and client.

5. No personnel shall conduct a permit required confined space entry. In addition, no personnel shall approach any excavation area where there is danger of a wall collapse.

6. Respiratory protection is dependent on conditions listed below Section 6.2. Level C respiratory protection at this site consists of a NIOSH-approved particulate filtering facepiece respirator with filter designation N100 or P100.

6.2 Air Monitoring Equipment and Materials

1. Calibration: A qualified individual will calibrate the relevant field instruments at the beginning of each day and will perform a calibration check midday and at the end of each work day. Applicable instruments include but are not limited to photoionization detector (PID) or flame ionization detector (FID), visible dust meter, or other equipment needed to monitor COPCs identified for the site as described in Section 5.0.

2. Frequency: The worker breathing zone will be initially monitored approximately every hour and recorded in Appendix F. If site monitoring data indicates that exposures are below action levels, the monitoring frequency may be reduced with permission form the Site Safety Officer, as long as site conditions have not changed and site activities will not create new exposures. Periodic monitoring may be stopped when site monitoring data indicates that breathing zone shows no hazardous conditions or air contaminants. However, if monitoring is stopped, data to support this decision must be available onsite for review. (Table for recording data is provided in Appendix F.)

   In addition to periodic site monitoring, breathing zone monitoring should always be conducted and documented (in Appendix F) during tasks that may result in continuing or new exposures, such as active drilling, probing, or excavating. If there are more stringent state or federal regulatory requirements for site monitoring, those requirements must be followed.

Instrumentation

Instrument	Breathing Zone Reading	PPE Upgrade or Other Actions To Be Taken
DataRAM PDR1000 or equivalent – real-time particulate dust monitor	>10 mg/m^3 0.5 - 10 mg/m^3 <0.5 mg/m3	Work must stop until action level summary is below 10mg/m^3. Work may continue. NIOSH-approved particulate filtering face piece respirator with filter designation N100 or P100 must be worn.
Sound Level Meter	< 85 dBA 85 - 90 dBA > 90 dBA	Suggest wearing hearing protection when it is necessary to raise voice to be heard at distance of 3 feet. **Hearing protection required.** Install warning signs for fixed noise sources. **Hearing protection required.** Employer must have Hearing Conservation Program.

7.0 SAFETY STANDARD OPERATING PROCEDURES (ALSO SEE APPENDIX D FOR SITE SAFETY CHECKLIST)

7.1 Chemical Hazards

Action limits for use of respiratory protective equipment are outlined in Section 6.2 above. All respiratory protection equipment shall be NIOSH -approved and use shall conform to OSHA 29 CFR 1910.134.

In addition to inhalation affects, arsenic and lead are also eye and skin irritants. In situations where sampling would result in direct skin contact contaminated soil or contaminated equipment, nitrile gloves will be worn. Safety glasses will be worn to prevent eye contact.

7.2 Physical Hazards

1. Mechanical hazards: Ensure that mechanical equipment is properly guarded and overhead hazards are removed or secured to prevent being struck or entrapped by moving parts or heavy equipment or falling objects.

   Maintain a safe distance from heavy equipment and moving machinery parts.

   Tools and equipment used on site shall be in proper working condition. Workers using tools and equipment must be properly trained in their use.

2. Electrical hazards: Be aware of underground and overhead utilities. For protective measures against underground electrical cables see Section 7.3 Underground Utilities.

   For overhead power lines, OSHA requires a minimum distance of 10 feet from overhead lines transmitting up to 50kVs and an additional 4" of distance for every 10kV after 50kV, from any unguarded, energized overhead line. For example: 15 feet from lines transmitting up to 200kVs and 25 feet from 350kV lines. However, because power lines, rig masts and other elevated objects can move due to wind or other forces, **where possible try to maintain at least 20 feet clearance from any lines, or an additional 5 feet from any OSHA minimum distance that exceeds 20 feet.** If it is critical to work within 20 feet of a line, or at OSHA minimum distance, efforts should be made to have the lines covered ("shrouded") or shut off and locked out by the local power company. If neither can be accomplished, contact the Site Safety Officer.

   Generators, powered hand tools and extension cords used must be grounded. Extension cords must be inspected at the start of each work day to ensure that they are not damaged. Frayed or otherwise damaged extension cords shall not be used onsite, and must be taken out of service unless they can be properly repaired.

   Heavy equipment, including drilling rigs and vacuum trucks, must be grounded when the potential for static electricity build up and its uncontrolled release exists. Confirm with the equipment operator that equipment is grounded as needed. All equipment will be properly locked/tagged out when required. Do not stand in water when operating electrical equipment.

3. Open excavations: Open excavations deeper than 6 feet that are not clearly visible to site workers and the public must have fall protection measures in place, such as barricades and warning signs. When scheduling or work conditions necessitate leaving excavations open overnight, security fencing will be erected to restrict access to the site or work zones described in Section 2.9

   Excavations must be properly constructed and maintained as per Section 7.11 of this HASP.

4. Hazardous plants or animals: Poisonous plants, and stinging, biting or other dangerous animals can be encountered on field sites. Identify workers with any allergies. Do not touch any plants that you cannot identify. Clear brush from well locations and other work areas. If necessary, arrange for vegetation removal by a landscaping company. Do not approach or provoke any animals, including spiders or insects. If a worker is bitten or stung by insect or spider, provide first aid

and monitor the worker for a reaction. If an insect, or spider bite is suspected to be serious, or a worker is bitten by snake or other animal, seek medical attention immediately.

5. Slip, trip fall hazards: will be minimized by maintaining good housekeeping practices at all times. Keep the work area free of debris, unused tools, extra supplies, or any other objects that could interfere with walking and working surfaces.

7.3 Underground Utilities

A minimum of 72 working hours prior to excavating, Underground Service Alert or the state equivalent:

Name _____ Phone _____

will be contacted and informed of the scheduled field activities. The underground service locator company will identify which underground utilities (e.g. electrical, gas, sewer, water, telephone, cable TV) are present and will notify their respective owners. The utilities will be located by their owners. See Excavation Section 7.11. **Look for overhead utilities** as well.

Utility service locator company has been notified? **If applicable attach contact sheet to back of document.**	Date(s)	_____ _____	Confirmation #, if applicable:	_____ _____

7.4 Work Limitations (time of day, weather, heat/cold stress)

In the event of severe weather, such as high winds, heavy rain or snow, tornadoes, electrical storms, or extreme temperatures, the SSO and PM shall determine whether work can continue without compromising site worker health and safety.

In high ambient temperatures (especially with high humidity), ***follow heat-stress precautions***. Drink plenty of cool water and/or electrolyte-replacement beverages (e.g., Gatorade). Take frequent breaks out of direct sunlight removing protective clothing. Provide shade to workers if necessary. Increase number of breaks if pulse does not return to normal resting pulse during breaks. Alter schedules so work is conducted during early morning or evening. Work shall progress only under conditions of adequate lighting.

Symptoms of heat exhaustion and heat stress include:

- Profuse sweating **or** complete cessation of sweating;
- Changes in skin color;
- Increased respiration;
- Vision problems, confusion;
- Body temperatures in excess of 100^{o}F; and
- Increased heart rate.

Any member of the work team who exhibits these symptoms should immediately be removed from the area and observed while resting in a shaded area after removal of impervious or restrictive clothing and after consumption of cool water or electrolyte fluid. If symptoms persist, immediate medical attention shall be sought.

In cold temperatures, especially when combined with high wind, follow hypothermia precautions:

- Drink warm liquids and take frequent work breaks in a wind-sheltered area. Monitor co-workers for signs of shivering, lack of coordination, or confusion. and remove workers exhibiting these signs from the work area to a heated warming shelter.
- Dress in removable layers of insulated clothing to prevent sweating and use protective waterproof gear;
- Frostbite (superficial or deep tissue) can occur on any exposed skin at temperatures of 30.2^{o}F or colder.
- If available clothing does not give adequate protection to prevent hypothermia or frostbite (which can occur on any exposed skin), work should be modified or suspended until adequate clothing is available or until conditions improve.

If extreme cold conditions are encountered (e.g. < 10^{o} F), discuss proper clothing requirements and a warming break schedule with the Project Manager. Consider rescheduling the work if possible.

7.5 Fire and Explosion Hazards

Each site will be inspected for fire and explosion hazards during a pre-work site walk-through.

Extreme caution should be taken to monitor for the presence of flammable vapors or conditions that could create flammable conditions. Fire extinguishers must be available on all sites with the potential for flammable vapors or electrical fires (i.e., systems, control panels). Use of fire extinguishers by employees trained in their use is limited to employee rescue or extinguishing relatively small, controllable fires. Antea Group does not expect or require its employees to fight fires.

In the event of a fire or explosion, the following action plan should be followed:

Shut down equipment and shut off all supply lines immediately if this can be done safely. (Notify the site operator to shut down operations if necessary.)

Evacuate the immediate area. At this point you may not know if a soil vapor fire has started or if a supply line, natural gas line, etc. has been hit. Tank, supply line, or remediation system fires are extremely hazardous and precautions must be taken to evacuate the area immediately.

Call 911 to notify the fire department. Every fire should be treated as an emergency. Even if site personnel extinguish the fire, professional fire departments should evaluate the situation to ensure that the danger is over and that a fire will not reoccur.

Evaluate the situation to identify the source of the flammable vapors and to assess the danger to employees, the public and property. From a safe distance, try to determine if the fire is due to a ruptured supply line, ignited soil vapors or methane, or is electrical. This information should be communicated to the fire department. Small fires from known sources (i.e., engine fires, electrical panel fires, etc.) may be extinguished if the employee can do it without high risk. A soil vapor fire may eventually burn itself out. Soil stockpiles must be placed away from nearby structures and property lines. Extinguishing fires in fuel vapor-laden soils with clean soil may be possible. **Personnel or subcontractors shall not enter an excavation to attempt to extinguish a fire.**

Fire, Explosion and Vacuum Truck Operations—vacuum truck operators must ensure that the truck and hoses are properly bonded and grounded prior to initiating vacuum operations and that vacuum truck hoses are properly tested for continuity each work shift.

Vacuum truck operators must ensure that the materials to be collected are compatible with residual materials that may already be in the truck or the truck must be washed prior to use. Hydrocarbons and other vapors created by the vacuum pump exhaust shall be vented away from the work area and away from areas where people are present.

7.6 Noise/Hearing Protection

Workers shall be instructed in the recognition of noise hazards and shall be provided, and trained in the use of, hearing protective devices. Monitoring should be performed for on-site noise sources that are suspected to be above 85 dB. Record sound readings in Appendix G. If monitoring has not been performed for suspected noise sources, hearing protection must be worn. As a general rule, hearing protection should be worn when working around heavy equipment, particularly drill rigs, or when background noise is such that a worker has to raise their voice to be heard at a distance of 3 feet.

7.7 Levels of Protection

General duties, away from chemically impacted areas on site, must be performed, at a minimum, in the following Level D protection:

- hard hat
- steel-toed (safety-toed) work shoes/boots, meeting ANSI/ASTM standards
- sleeved shirt (short sleeve minimum) and long pants, or cotton coveralls
- eye protection- safety glasses (ANSI Z87), goggles or face shield as required
- high visibility safety vest (ANSI Class II preferred)
- gloves- sampling (nitrile) or work (leather, synthetic leather, Kevlar, etc. depending on work tasks), and
- hearing protection, as needed.

On work sites requiring Level B protection, workers will be provided with additional training and equipment.

7.8 Decontamination Procedure

Level: B. [ ] C. [x] D. [ ]

Contamination may result from walking through contaminated soils or liquids, splashing liquids during sampling, use of or contact with contaminated equipment, or contact with air contaminants. Field team workers will be instructed to observe the following precautions to assure contaminants will not remain in contact with their skin.

- Tools, equipment and personnel will be decontaminated using procedure appropriate for level of personal protection worn.
- All contaminated, disposable clothing will be properly bagged for disposal and left on site. All personnel will be instructed to wash hands, face, neck and forearms at the end of the work shift and to shower at the end of the workday.
- No eating or drinking will be permitted in the vicinity of heavy equipment and/or drilling and excavating activities. Smoking is only permitted in pre-designated area when approved by contractor and the client.

Special decontamination requirements: _____

7.9 Confined Spaces

If entry into a confined space is necessary, only confined spaces trained personnel shall be used and a Confined Space Entry Permit must be completed and authorized, and confined space entry procedures followed.

Does this site have any permit-required confined spaces?	Yes	[ ]	No	[x]
Does someone need to enter the permit-required confined space as part of the work?	Yes	[ ]	No	[x]

7.10 Investigation – Derived Material Disposal

Soil cuttings and well development or sampling water shall be placed in 55-gallon drums on-site, unless on-site disposal is allowed under both regulatory and client requirements. Drums must be in sound condition (new or reconditioned drums) with lid that seals and can be tightened in place. Disposal methods of drummed soil and water will be determined based on laboratory analytical data.

Drums stored on site until disposal shall be labeled, sealed, and if possible, placed on an impermeable surface in a secure location prior to the field team leaving the site. At a minimum, non-hazardous waste containers must be marked with a description of the material, and emergency contact information (company name and phone number). Hazardous waste must be marked and labeled so that the container complies with applicable DOT or RCRA requirements. Drums must be removed within 90 days of waste generation.

7.11 Excavations

All soil excavation and utility trenching is to be undertaken in strict conformance with all applicable local, state, and federal regulations. Subcontractors performing excavations on-site must have a competent person in charge of the excavation, who performs daily inspections of the excavation. Entry into excavated areas or trenches is allowed only when:

1. Shoring, sloping and spoil pile placement is in conformance with 29 CFR 1926 Subpart P, and
2. Personal protection and monitoring, as detailed in this Site Health and Safety Plan, have been implemented, and there is no hazardous atmosphere or other unsafe condition in the excavation.

8.0 DRILLING AND EXCAVATING HEALTH AND SAFETY GUIDANCE PROCEDURES

8.1 Preparation

Prior to conducting any subsurface work, a markout must ALWAYS be called in (approximately three working days before field work is scheduled - depending on the area). In some areas, not all markouts are performed by the "Call Before You Dig System," thus contacting the appropriate utility companies and assuring their markouts must be tracked by the contractor responsible for the markouts. Private utility mark-outs should also be arranged when site work and conditions warrant it.

- Always search the file and request the client search files for an as-built of the station/facility.

8.2 When on Site

- Contractors are required to perform an on-site inspection of their heavy machinery each day prior to the start of fieldwork. The Site Safety Officer (SSO) will observe the inspection. Any safety concerns identified by the subcontractor must be addressed prior to the use of the equipment. During the inspection, the contractor must verify that all rig/vehicle kill switches are working properly. Personnel on-site must be informed of the location of the kill switches and how to operate them.

  - As part of your on-site health and safety meeting, walk the site with the field team to identify any additional site hazards and determine possible boring locations (make sure the locations shown on the work plan/site plan are in areas free of utilities/subsurface structures). Make sure all utilities have been marked out properly. It is the contractor's responsibility to ensure all boring or excavation locations are clear of utilities prior to drilling. Often "as-builts" are incorrect or not available.

  - Attempt to determine how all utilities are running. For the most part, utilities can run anywhere and can bend and twist in any direction but, there are a few basic things to keep in mind. Usually water and sewer lines will run to a bathroom. Electrical lines will run in between on-site lights, the kiosk, service station and car wash buildings. Storm water drains usually tie into one another and you can get a general idea of how they run by looking into them and seeing what direction the line is going. Obviously any cut outs in the asphalt should be avoided, especially if observed around the USTs (often, leak detection is an afterthought and is added following the completion of the service station rebuild and its location is obvious due to a continuous cut out in the asphalt around the tank field).

  - If you hit/damage any utility/subsurface feature IMMEDIATELY contact the SSO for further instruction.

8.3 Drilling Activities

- Drilling operations shall at all times be under the immediate supervision of a contractor's representative who has authority to modify the work methods as necessary to ensure safety.
- Contractors shall ensure properly designed cribbing (i.e., wooden mats) is always carried with mobile drill rig to work site.
- Where practical, drilling should always take place on "level" surfaces. If the proposed site is not level, consideration should be given to selecting another suitable site that is level, or to leveling the site by re-grading.
- Drilling locations must be clear of underground and overhead hazards as discussed in this HASP.
- Additionally, the guidance provided in the Environmental Remediation Drilling Safety Guidelines (ERDSG) industry document **should** be followed.

9.0 TRAFFIC CONROL AND ON-SITE VEHICLES/MOBILE EQUIPMENT

Remediation site work frequently necessitates working in parking lots, streets or other areas with vehicular traffic. In such instances, the work team will be wearing high visibility traffic safety vests (ANSI Class II minimum recommended) and will use a combination of traffic cones (recommended height - 42-inches) and barricades as necessary to prevent contact between workers, pedestrians and motor vehicles. Proper placement of large contractor vehicles such as field trucks and drill rigs to add a layer of protection should be considered.

Check for specific DOT requirements when working in or near a road or road right-of-way. In such cases, traffic control set up will need to be subcontracted to a traffic control subcontractor.

A **Site Specific Traffic Control Plan** should be developed for high traffic sites, or other high-risk locations. The plan (map) should include known site traffic patterns and the control equipment set up used to divert or restrict traffic and to define site work (exclusion) zones. **Include Traffic Control Plan in the "Figures" section at the end of the HASP.**

Onsite Vehicles:

- Enter and exit through the gates or pathway provided and designated for this use.
- Vehicles will not be driven over unprotected hoses or exposed piping.
- Vehicles may be left running **only** when operating auxiliary equipment or lights, and then only when driver can ensure the vehicle is secure with the transmission in park or neutral, the parking brake set and the wheels chocked.

Earth Moving Activities:
All mobile earth-moving equipment on-site must comply with 29 CFR 1926.602 for back-up alarms or signal persons.

Dig and Haul Projects:
Dump trucks should only dump the load on **level** ground so the hazard of "tip-over" is avoided. If absolutely necessary, the dump truck can dump into the slope (i.e., back of truck facing directly uphill).

Any truck that has a raised bed dumping feature (i.e., dump-truck) must always lower bed before driving forward to leave the immediate work area. This is due to two hazards:

- *Tip-over* due to change in gravity of raised bed and
- *Hitting overhead obstacles* (like power lines or canopies).

10.0 JOURNEY MANAGEMENT PLAN

Provide directions for the preferred route from and to the field site, with the preferred/safest exit and entry points to the site. Also, provide any specific information of problem traffic areas that should be avoided when traveling in the area of the site. Information can be provided via maps, written instruction or both, as appropriate and available. Use the "Figures" section at the end of the HASP. (Information regarding onsite traffic flow and mobile equipment is provided in the Traffic Control Plan in Section 9.0.)

Additional Comments:

- Seatbelts must be worn by all occupants in traveling vehicles
- Including the requirements for drivers to have all appropriate licenses, and to have received defensive driver training within the last two years.

10.1 Lone or Isolated Worker

Workers shall not be put into a situation where they are left alone or isolated with no means of quickly summoning help should he/she become incapacitated due to injury or vehicle accident.

- A positive means of communication, i.e. a device such as a walkie-talkie, vehicle radio or cell phone, shall be provided to all field personnel.
- Lone employees shall check in with their supervisor or their field office at the start of the day, mid-day, and a final status report call at the end of the day (so others know where the worker is and that he/she is safe).
- In high hazard/crime affected areas, consider assigning two workers.

11.0 SUBCONTRACTOR TRAINING AND SAFETY DOCUMENTS

All subcontractors must meet OSHA training requirements for the work they will perform while onsite. Subcontractor workers that have the potential to be exposed to slag-affected soil must have initial HAZWOPER training and up-to-date annual 8-hr refresher training.

The contractor and subcontractors shall be responsible for the development and implementation of their own HASP and/or JSAs to cover duties and hazards specific to that subcontractor's area of expertise or on-site functions. Subcontractors are given the opportunity to review the HASP, and must sign the document, prior to the start of on-site work. Subcontractors are required to provide job safety analyses (JSAs) or written safety standard operating procedures, for the primary tasks they perform on-site. Contractors are required to review these safety documents with the work team during the appropriate on-site safety meetings

(tailgate, etc). Any discrepancies or conflicting safety requirements between Antea Group and subcontractor HASPs shall be addressed prior to the start of field work.

All subcontractor employees must attend and participate in all on-site safety meetings as required by the contractor. All on-site subcontractor workers must be able to effectively communicate with all field workers in English. If not, a translator/mentor must be assigned to those employees that cannot communicate in English to assure that all employees understand the safety information communicated on-site.

Any hazardous work situations, unsafe acts and conditions, near misses, or other safety incidents must be reported to the Site Safety Officer immediately so that corrective measures may be taken, and the information can be reported to the contractor and Public Storage project managers in a timely manner.

12.0 BEHAVIORAL SAFETY OBSERVATIONS

Behavior Based Safety is an established method of using reinforcement to change unsafe individual behaviors. The process starts with a behavioral hazard analysis to identify "at-risk" behaviors. These can be determined by using near miss/incident reviews, JSAs, audits, etc. Using the inventory of at-risk behaviors, a checklist is then developed to assist in the observation of work behavior. Observers record safe and at-risk behaviors and provide feedback to workers about their performance. The feedback reinforces the necessity for safe behaviors. Observation data also is used to identify barriers to safe behavior. Removing these barriers lowers the workers' exposure to at-risk conditions and makes it easier for employees to work safely. A behavior based safety observation (BBSO) checklist has been developed from an analysis of its near miss/incident data, JSAs and auditing data which is attached as Appendix H. Field teams should perform one BBSO per field event.

13.0 ACKNOWLEDGMENT AGREEMENT

13.1 Contractor/Consultant

SITE HEALTH AND SAFETY PLAN REVIEW RECORD

I acknowledge that I have read and understood the contents of this Site Health and Safety Plan and I agree to abide by all provisions as set forth. I have also checked in with the site client contact to alert them of our presence and for any daily safety issues. Please note: "no implements are to be brought onsite or are intended to be used, as weapons (such as: guns, knives, etc.)". Firearms are expressly prohibited. By signing below you are certifying, that this policy is upheld.

NAME	SIGNATURE	CELL PHONE	DATE

NAME	SIGNATURE	CELL PHONE	DATE

13.2 Subcontractor & Visitor

SITE HEALTH AND SAFETY PLAN REVIEW RECORD

I have been given the opportunity to review the Health and Safety Plan for this site and have been briefed on its contents and on the nature of the contaminants and the level and degree of exposure likely as a result of participation in this project. I agree to conform to all the requirements of this plan. (This HASP does not replace the requirement or liability for your company to have it's own safety program and HASP.) I also acknowledge that this plan is specific for this Antea Group site and may not address unforeseen hazards not included in the Site Health and Safety Plan or your specific contracted task. Please note: "no implements are to be brought onsite, or are intended to be used, as weapons (such as: guns, knives, etc.)". Firearms are expressly prohibited.

By signing below I am certifying that this policy is upheld.

ALL WORKERS HAVE THE AUTHORITY TO STOP, AND/OR REFUSE TO PERFORM, ANY UNSAFE WORK.

NAME & AFFILIATION	SIGNATURE	CELL PHONE	DATE

NAME & AFFILIATION	SIGNATURE	CELL PHONE	DATE

APPENDIX A
DAILY TAILGATE MEETING
OUTLINE/CHECKLIST

DAILY TAILGATE MEETING OUTLINE/CHECKLIST

SITE INFORMATION	
Date:	
Site Name:	
Site Location:	
Project / Site Number:	
Name of Antea Group Employee Leading Meeting	
Title of Antea Group Employee Leading Meeting:	

	YES	NO
Are all field team members in attendance for the tailgate meeting?		
Are there potential language barriers or concerns?		
Is safety information provided in language(s) that all workers understand? (If no an interpreter is required.)		
Identified worker with the least years of experience. Name: Company:		
How many years (or months) experience for worker? # of yrs / months:		
How many workers have less than 1 year experience?		
Is each one assigned an on-site mentor?		

TAILGATE DISCUSSIONS POINTS **(*see next page for additional guidelines*)**	**COVERED** YES	NO
INTRODUCTION- site background, field team introductions, training documentation review		
SITE HAZARDS- perform site walk-thru with team, locate utility markings, work locations, ID any site hazards		
Locate site/facility Emergency Stop switches		
EMERGENCY ACTION PLAN - emergency #s, evacuation signal & routes (walk them), 1st aid kits, training, etc		
WORK HAZARDS- scope-of-work, etc		
Antea Group discuss safety of Antea Group tasks to be performed- review JSAs		
Contractor(s) discusses safety of contractor work tasks to be performed- review JSAs		
List JSAs reviewed		
Heavy machinery inspection, kill switches located and tested		
Hand tools, power tools and other equipment inspected ***INSPECT portable fire extinguishers onsite***		
On-site impacts, other chemical on-site- monitoring procedures, PPE upgrade and action levels		
ONSITE VEHICLE MOVEMENT AND SPOTTER REQUIREMENTS - discuss movement of work vehicles and spotter procedures		
HIGHLIGHT SPECIFIC WORK CONCERNS- e.g. excavation, drilling, utilities, power lines, traffic, weather, etc.		
PPE REVIEW - review standard PPE, upgrades needed		
Gloves available on site match the glove type(s) listed in the JSAs for today's work? *NOTE: Any gloves not listed in JSA cannot be used onsite without management approval and field editing of onsite JSA*		

DAILY TAILGATE MEETING

OUTLINE/CHECKLIST

CLIENT/SITE SPECIFIC SAFETY PROTOCOLS - FOBK practice, utility clearance requirements, etc.		
REQUIRED PERMITS. LIST:		
PROACTIVE SAFETY ACTIONS - report all near misses, stop work authority, STOP WORK as needed,		
FEEDBACK - Worker questions, comments, concerns		
Have all worker signed the site health and safety plan?		

DAILY TAILGATE MEETING

OUTLINE/CHECKLIST

TAILGATE MEETING ATTENDANCE *(use additional sheets if required)*		
Worker Name	**Company Name**	**Signature**

AFTERNOON TAILGATE MEETING		YES	NO
Afternoon Tailgate held?			
List Topics:			
Name & Title or worker leading afternoon tailgate meeting:			

DAILY TAILGATE MEETING OUTLINE/CHECKLIST

DAILY TAILGATE MEETINGS

Daily tailgate meetings shall be held at the start of each work day, shift or task change.

The daily tailgate meetings shall review the planned work activities for the day, discuss and resolve the risks and mitigations, discuss any Health, Safety, Security and Environment (HSSE) concerns and raise the HSSE consciousness of each worker before they start work.

These meetings shall include, but are not limited to:

- A review of relevant Health and Safety Plan (HASP) elements to be performed at an appropriate frequency. A review shall be done whenever the HASP is updated and should also be done regularly to remind workforce of relevant elements.
- A Hazard Communication (HAZCOM) review.
- Address the risks of any issues arising from the site walk and the location of on-site equipment and materials.
- Complete the tailgate safety meeting forms.
- A review of applicable permit/s.
- A review of the right and obligation to 'Stop Work.'
- Complete and review *Job Safety Analyses* (JSAs) for the tasks to be completed. The focus should be on how to complete activities on a given site during that work day and activity. The JSA discussion should include identification of 'Stop Work' triggers.
- Implement the controls set forth in the HASP and JSAs. Verify that all parties on site have a complete understanding of the work plan and controls that are in place.
- In addition, allocate resources and complete permits.

PARTICIPATION AND PREPARATION

Effective daily tailgate meetings require participation. Team members should recognize the connection between the meetings and their personal safety.

Involvement of all team members is a critical factor for a successful meeting.

The conductor of the daily tailgate meeting shall prepare by achieving a thorough understanding of: JSAs, HASP, the scope of work, the subcontractors on site, and client requirements.

Additionally, the conductor of the meeting should have the required checklists available to verify that he or she covers all applicable and necessary topics.

TAILGATE MEETING LOCATIONS

When selecting the location of the meetings, the following shall be considered:

- Safety of personnel.
- Background noise.
- Uncomfortable or cramped locations.
- Weather and environment.

APPENDIX B

INCIDENT REPORT FIELD FORM

INCIDENT REPORT FIELD FORM

GENERAL INFORMATION	
Personnel Name Reporting:	
Date of Incident:	
City/State of Antea Group Office:	
Site Project/ID Number:	
Site Location (Street, City, State):	
Client Project Manager Name:	
Subcontractor Name (if applicable):	
Incident Location (Street, City, State):	
Short Description of Incident:	

CONDITIONS					
Weather:		**Temperature:**		**Lighting:**	

WHEN DID INCIDENT OCCUR						
	Month	**Day**	**Year**	**Time (hrs)**	**(min)**	**AM/PM**
Occurred						
Reported						

DETAILS		
Witness Name (s)	**Employee/Contractor/Other**	**Phone #**

Equipment Involved:	
Incident Type:	

Environmental Release Info	**Product / Material**	**Amount**	**Unit**

Full Description of Incident:	
Immediate Actions Taken:	
Reported by:	
Date:	

APPENDIX C

HASP

HAZARDOUS PROPERTY INFORMATION

(including MSDS)

APPENDIX D
FIVE (5) DAY SAFETY CHECKLIST

5 DAY SITE SAFETY CHECKLIST

Site Name/Project No.:	
Site Address:	

DATE:			
Pre-Mobilization		**OK**	**NA**
Updated health and safety plan			
Emergency phone numbers for utilities included			
Proper personal protective equipment (PPE) selected & inspected			
• Hard Hat			
• Safety Glasses (with side shields)			
• Safety Vest			
• Work Gloves			
• Sampling gloves (PM specify type):			
• Protective coveralls (specify, Tyvek, Nomex, etc.):			
• Safety Boots			
• Respirator/cartridges (PM identify proper cartridges) :			
Other Protective Equipment			
Eye wash (check expiration date)			
Fire extinguisher (visually inspected within last 30 days)			
First aid kit (inventory and check expiration dates)			
Safety cones (or flashing traffic light)			
Underground utility hazards identified and addressed			
Underground utility hazards identified and addressed (provide public utility one-call ticket or job number			

On-Site Pre-Work	**DATE (mm/dd/yy)**				
Review site hazards and HASP w/ site workers					
Review route to hospital					
Site workers sign HASP acknowledgement page					
Place HASP and emergency numbers in visible location					
Designate evacuation signal and meeting place					
Delineate exclusion zone					
Check subcontractor PPE-					
• Hard Hat					
• Safety Glasses (with side shields)					

On-Site Pre-Work	DATE (mm/dd/yy)				
• Work Gloves					
• Sampling Gloves					
• Protective Coveralls (specify, Tyvek, Nomex, etc).					
• Safety Boots					
• Respirator					
• Subcontractors					

5 DAY SITE SAFETY CHECKLIST (OPTIONAL) (continued)

On-Site Pre-Work	DATE (mm/dd/yy)				
Subcontractors-					
• Subcontractor has own HASP or field SOPs on-site (when required)					
• Confirm sub. Equipment (e.g., drill rig, ext. cords) is in sound working condition)					
• *Drilling subcontractor:* drill rig kill switch identified, located and tested					

On-Site Work	DATE (mm/dd/yy)				
Proper PPE worn by site workers					
Breathing zone monitoring performed and recorded					

(Specify any new hazards identified on-site not addressed by site HASP. If new hazard cannot be mitigated by the existing scope-of-work and/or available equipment on-site, stop work and immediately contact the site project manager.)

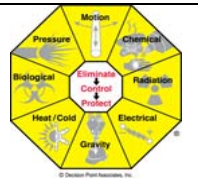
(Sign and date at the end of the field work.)

Name:	
Signature:	
Date:	

REPORT ALL INCIDENTS AND NEAR MISSES IMMEDIATELY

APPENDIX E
JOB SAFETY ANALYSIS

JOB SAFETY ANALYSIS



Job Safety Analysis for: ***(State Task)***			
CONTRACTOR:		DATE:	
PROJECT MANAGER/SITE SUPERVISOR (List Name(s)**::**			
PERMITS REQUIRED (Y/N) List Type: **?**			
JSA TEAM MEMBERS:			
LOCATION OF WORKSITE	Street, w/Cross Street:		
	City, State, Zip:		
DESCRIPTION OF WORK:			
Team Leader Reviewed by Signature:		Date:	

Sequence of Basic Job/Task Steps *List the tasks required to perform the activity in the sequence they are carried out.*	**Potential Hazards (Energy Sources) Involved with Task/Environment** *Against each task list the hazards that could cause injury when the task is performed.*	**Control Measures (Eliminate, Control, Protect)** *List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard.*	**Stop Work Triggers** 

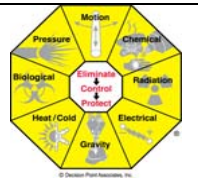
JOB SAFETY ANALYSIS

Sequence of Basic Job/Task Steps *List the tasks required to perform the activity in the sequence they are carried out.*	**Potential Hazards (Energy Sources) Involved with Task/Environment** *Against each task list the hazards that could cause injury when the task is performed.*	**Control Measures (Eliminate, Control, Protect)** *List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard.*	**Stop Work Triggers** 

JOB SAFETY ANALYSIS

Sequence of Basic Job/Task Steps *List the tasks required to perform the activity in the sequence they are carried out.*	**Potential Hazards (Energy Sources) Involved with Task/Environment** *Against each task list the hazards that could cause injury when the task is performed.*	**Control Measures (Eliminate, Control, Protect)** *List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard.*	**Stop Work Triggers** 

JOB SAFETY ANALYSIS

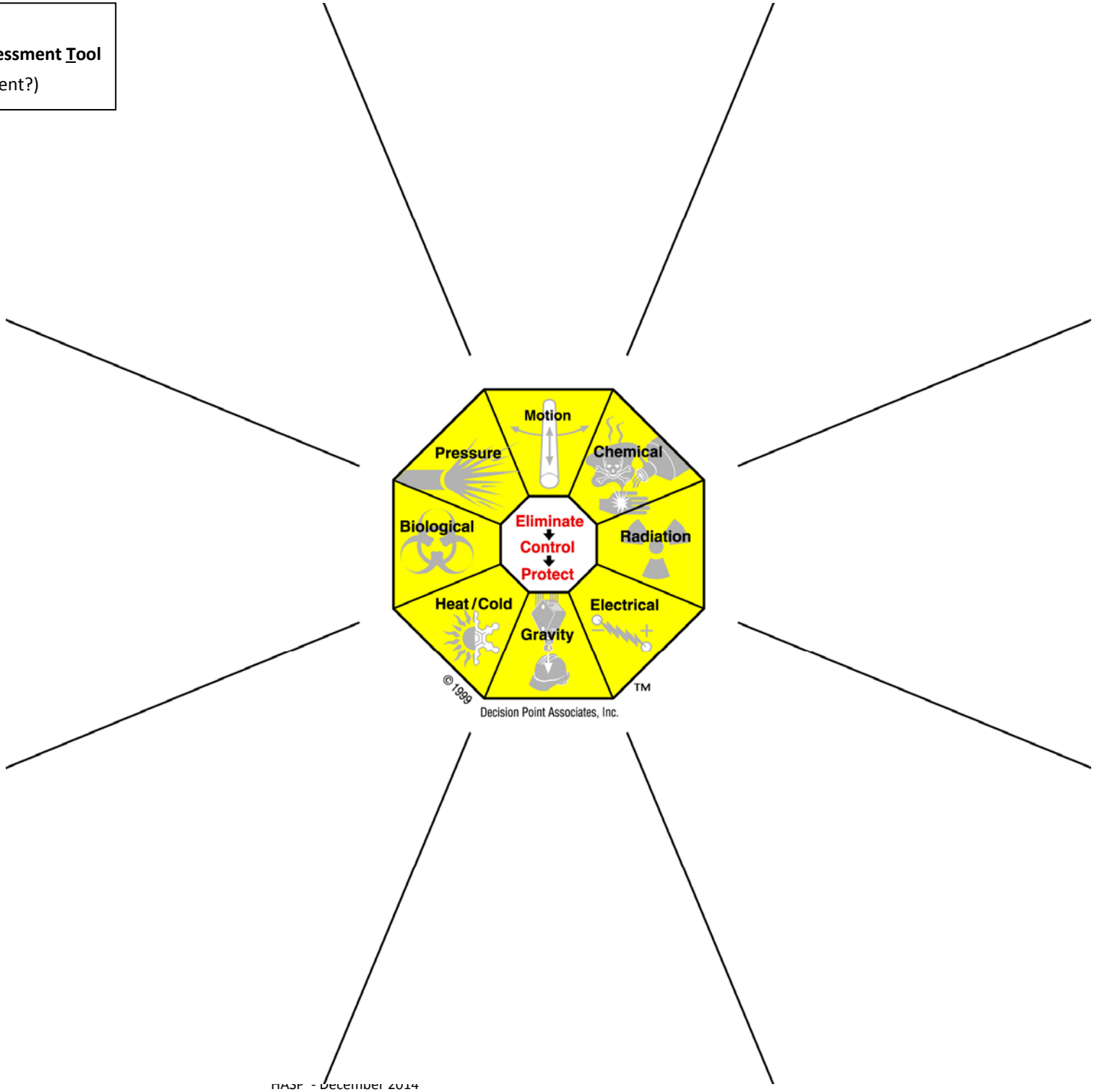


Sequence of Basic Job/Task Steps *List the tasks required to perform the activity in the sequence they are carried out.*	**Potential Hazards (Energy Sources) Involved with Task/Environment** *Against each task list the hazards that could cause injury when the task is performed.*	**Control Measures (Eliminate, Control, Protect)** *List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard.*	**Stop Work Triggers** 

HRP Team Process

Worksite Hazard Assessment Tool

(WHAT energy is present?)



For use with a JSA big picture or a worksite HSE inspection. Using the HRP Octagon in a clockwise manner starting with Energy of Motion, assess the worksite and determine what energy sources are present and/or what recognized hazards are associated with those energy

Use the following to help you DRAFT the job steps before starting the JSA:

DRAFT STEPS

1.

2.

3.

4.

5.

6.

7.

8.

ADDITIONAL FIELD NOTES/OBSERVATIONS:

APPENDIX F
AIR MONITORING LOG

AIR MONITORING LOG

PROJECT NUMBER:		**EMPLOYEE NAME:**	
PROJECT NAME:		**DATE:**	

Equipment	Sampling For	Serial Number	Calibration Date/Time	Calibration Check Date/Time
Dust Monitor (DataRAM)				

Weather Conditions:	Temperature:		Relative Humidity:	

Sample Time (indicate am or pm)	Dust Monitor Reading (mg/m^3)	Wind Speed & Direction	PAM Sample Collected for Laboratory Analysis (Y/N)	Sample Location and Activity Occurring During Sampling	Comments, Including Breathing Zone or Area Sample, PPE Worn, and Actions Taken

AIR MONITORING LOG

Sample Time (indicate am or pm)	Dust Monitor Reading (mg/m^3)	Wind Speed & Direction	PAM Sample Collected for Laboratory Analysis (Y/N)	Sample Location and Activity Occurring During Sampling	Comments, Including Breathing Zone or Area Sample, PPE Worn, and Actions Taken

APPENDIX G

SOUND LEVEL SURVEY LOG

SOUND LEVEL SURVEY LOG

PROJECT NUMBER:		**EMPLOYEE NAME:**	
PROJECT NAME:		**DATE:**	

Project Number:_____ Project Name:_____ Date:

Serial Number (SLM):		Serial Number (Calibrator:	
Calibration Readying (dBA):		Post Sampling Calibration Reading* (dBA):	

* Calibration readings will depend upon the calibrator that is being used.

Sample Time (indicate am or pm)	Readings (dBA)	Specific Activity Occurring During Sampling	Noise Source/Sample Location**	Comments, Including PPE Worn and Actions Taken

** Please draw a simple site map and indicate sample locations on the back of this page.

APPENDIX H

BEHAVIOR BASED SAFETY OBSERVATION FIELD CHECKLIST

BEHAVIOR BASED SAFETY OBSERVATION

FIELD CHECKLIST

Date:		Time:	
Site Name:		Worker Observed:	
Project Number:		Observer:	

Observations	Safe	Unsafe
	Write NA for any Non-applicable items	
Attended/participated in tailgate meeting		
Follows JSA and HASP work steps and safety procedures		
Works safely within defined work areas, traffic control/exclusion zone set up		
Wears required PPE		
PPE is good condition		
Uses correct tool(s) for job		
Tools inspected and/or in safe working condition		
Maintains good housekeeping		
Uses safe lifting techniques/ does not lift over 50 lbs without assistance		
Overall assessment of worker behaviors		

Feedback
Other Observations/Comments (areas of strong performance and areas for improvement):

Commitment (observed worker please sign)

I _____ (print name) have been informed of the above assessment, I understand all feedback, and I am committed to performing my work safely by:

- reporting to work physically rested and mentally alert
- observing and coaching my co-workers to ensure they work safely
- following procedures and not taking short cuts or improvising
- stopping all unsafe work, and
- demonstrating ZERO tolerance for willful unsafe actions.

Signature:		Date:	

FIGURES

ROUTE TO HOSPITAL MAP

SITE MAP(S)

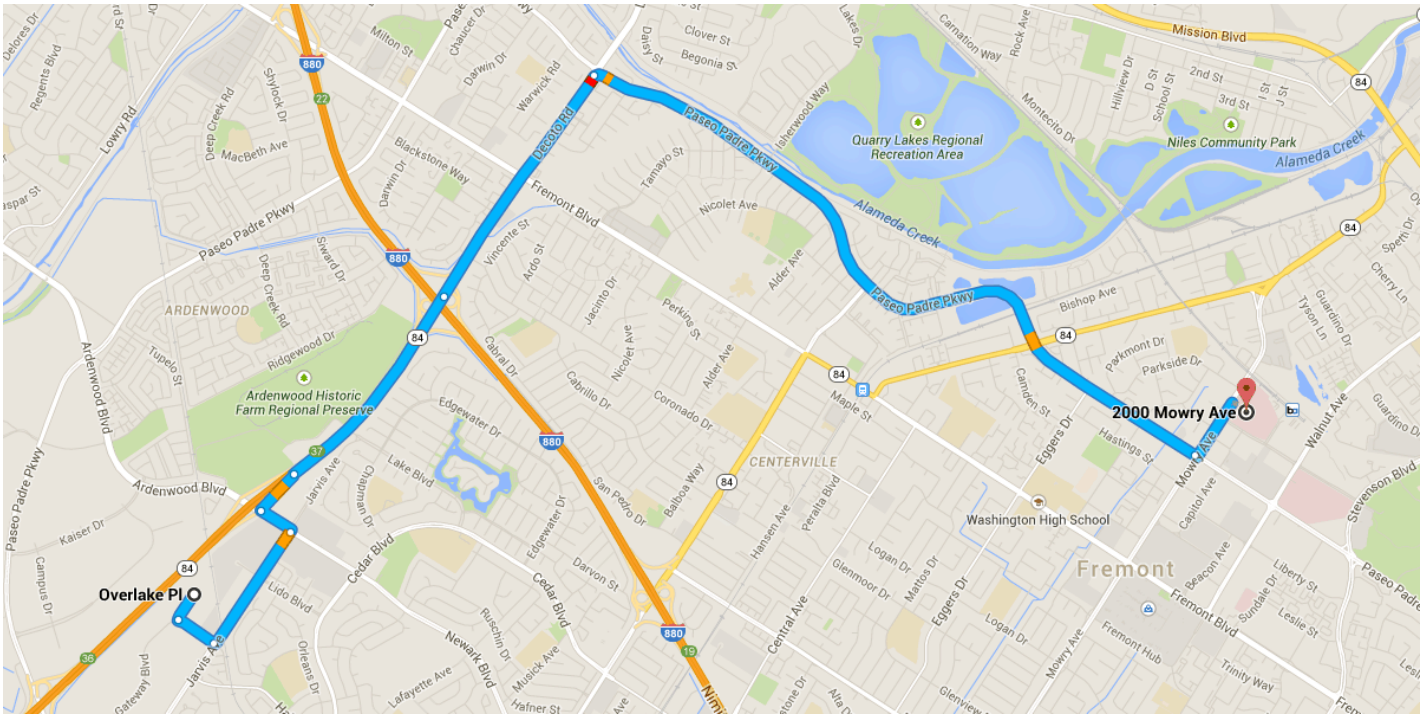
JOURNEY MANAGEMENT PLAN MAP AND INSTRUCTION

TRAFFIC CONTROL PLAN MAP

Google

Drive 6.5 miles, 13 min

Directions from **Overlake Pl** to **2000 Mowry Ave**

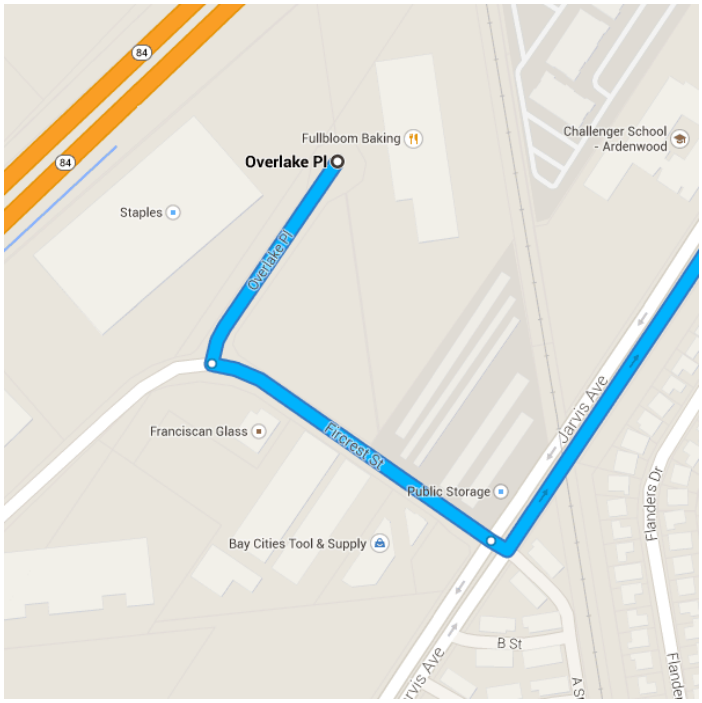


Overlake Pl

Newark, CA 94560

Take **Fircrest St** to **Jarvis Ave**

0.3 mi / 55 s



1. Head **southwest** on **Overlake Pl** toward **Fircrest St**

   0.1 mi

2. Turn **left** onto **Fircrest St**

   0.2 mi

Take **CA-84 E**, **Decoto Rd** and **Paseo Padre Pkwy** to **Mowry Ave** in Fremont

6.2 mi / 12 min

3. Take the 1st **left** onto **Jarvis Ave**

0.5 mi

4. Turn **left** onto **Newark Blvd**

0.2 mi

5. Turn **right** onto the **California 84 E** ramp

0.2 mi

6. Merge onto **CA-84 E**

0.9 mi

7. Continue onto **Decoto Rd**

1.1 mi

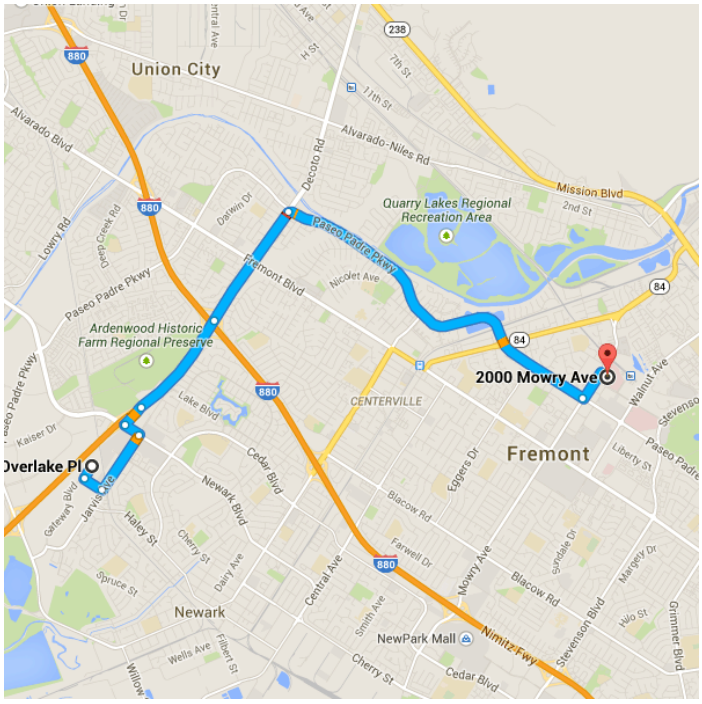
8. Turn **right** onto **Paseo Padre Pkwy**

3.0 mi

9. Turn **left** onto **Mowry Ave**

Destination will be on the right

0.3 mi



2000 Mowry Ave

Fremont, CA 94538

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Appendix B

Dust Mitigation and Air Monitoring Plan

Dust Mitigation and Air Monitoring Plan

Public Storage #CA13186
6800 Overlake Place
Newark, California

Alameda County Environmental Health
Case No. RO0003136
GeoTracker Global ID: T10000006057

Antea Group Project No. PUBL57819
December 8, 2014

Prepared for:
Public Storage
Northern California Newark, Inc.
701 Western Ave
Glendale, CA 91201
+1 818 844 8080

Prepared by:
Antea® Group
505 14th Street, Suite 900
Oakland, CA 94612
800.477.7411

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Appendices

Dust Mitigation and Air Monitoring Plan

Public Storage #CA13186
6800 Overlake Place, Newark, CA
Alameda County Environmental Health Case No. RO0003136

1.0 DUST MITIGATION AND AIR MONITORING PLAN OVERVIEW

1.1 Introduction

This Dust Mitigation and Air Monitoring Plan (AMP) has been prepared by Antea®Group on behalf of Public Storage Northern California Newark, Inc. (Public Storage) for the property located at 6800 Overlake Place in Newark, California (the site, **Figure 1**). This parcel is proposed for development of a new Public Storage facility. The Alameda County Assessor's parcel number for the site is 537-460-13 and the property size is approximately 3.06 acres.

This AMP is intended to support the Soil Management Plan (SMP). This AMP provides a procedure for managing airborne contaminants associated with remediation activities, which includes Best Management Practices (BMPs) for managing air quality and fugitive dust at 6800 Overlake Place located Newark, California (the site).

Potentially impacted soil is to be excavated and relocated under proposed cap surfaces per the Alameda County Environmental Health (ACEH) approved specifications of the SMP. Remediation activities are expected to be complete by the end of 2015.

1.2 Site Description

The site is a triangular-shaped, vacant and unpaved lot located at the southeast corner of the intersection of Fircrest Street and Overlake Place in Newark, California. The Alameda County Assessor's parcel number for the site is 537-460-13 and the property size is approximately 3.06 acres. **Figure 1** depicts the general location of the subject property and **Figure 2** depicts the subject property with the proposed Public Storage development layout and soil sample data. The surrounding site use is commercial/industrial in the direct vicinity, and residential use approximately 550 feet to the east. Adjoining property use consists of an existing Public Storage facility to the southeast, a commercial baking facility to the east/northeast, an industrial facility to the northwest and commercial office buildings to the southwest. A drainage canal is located on the south side of Highway 84, approximately 1,000 feet north of the subject property.

2.0 CONSTITUENTS OF POTENTIAL CONCERN

Soil disturbing activities have the potential to generate airborne dust which includes particulate matter smaller than or equal to 10 microns (PM10). Air born dust from the site could also contain metals. The following describes the Constituents of Potential Concern (COPCs) and the highest levels of COPCs observed in soil samples collected during previous investigations at the site.

2.1 Metals in Soil

Metals can be present in airborne dust generated at the site during construction activities. A review of historical soil data at the site show that lead is the COPC with the most likely risk of exceeding regulatory screening values, in dust generated at the site.

Maximum Metal Concentrations Detected in Soil

Metal	Boring ID	Date Sampled	Depth of Sample (ft bgs)	Maximum Detected Concentration (mg/kg)	ESL (mg/kg)
Lead	B-5d1.0	4/2/2014	1.0	1,400	320

3.0 POTENTIAL SOURCES OF FUGITIVE DUST

Planned site activities have the potential to generate fugitive dust emissions. Potential dust-producing mechanisms include:

- Construction Traffic – Movement of construction equipment around the construction area is capable of creating construction-related fugitive dust in excavated or cleared areas. There is also the potential for vehicular traffic on paved or unpaved roads and parking lots to produce fugitive dust.
- Excavation Activities – Excavation of impacted soil and backfilling operations can produce fugitive dust.
- Material Stockpiles – Stockpiles of excavated soil from grading and soil relocations activities may contribute to windborne dust emissions.
- Cleanup and Grading – Backfilling, grading and re-vegetating the excavated areas may produce fugitive dust.
- Wind – Wind can dislodge dust particles from the soil and disperse them into the atmosphere. These particles can have COPCs attached to them.

4.0 BEST MANAGEMENT PRACTICES

4.1 General

BMPs are structural, non-structural, and managerial techniques that are recognized to be the most effective and practical means to control pollutants. The sections below describe effective techniques that will be utilized to manage air quality resulting from remediation activities. The contractor or their designated environmental professional will verify proper implementation and effectiveness of the BMPs.

4.2 Visible Dust during Soil Disturbance Activities

The goal for this AMP is no visible dust to leave the site perimeter. While all parties understand that soil disturbance and excavation activities by their nature will produce dust, site controls will be used to mitigate visible dust as it is generated in an effort to achieve the goal of no visible dust at the perimeter of the site. This section establishes the steps that shall be taken to achieve this goal during soil disturbance activities. The criteria in this

section apply to an active work site when earthmoving equipment is being operated and performing soil movement activities.

4.2.1 Track-Out BMPs

Soil tracked onto roadways can produce fugitive dust. The following measures will be implemented to minimize dust from track-out to public roadways:

- Construction vehicles will exit the construction site through an on-site paved section of asphalt that assist with dislodging soil from the tires prior to leaving the site. This on-site paved section of road will be swept as necessary to remove the accumulation of soil and prevent track-out beyond the site entrance.
- Vehicle tires will be inspected and swept or cleaned as necessary to prevent track-out prior to entering the paved roadways.
- Visible track-out on a paved public road where vehicles exit the work site must be removed using brooms, sweeping or a combination of BMPs at the end of the workday and as applicable.
- Construction areas adjacent to paved roadways will be managed with BMPs, as specified in the Storm Water Pollution Prevention Plan (SWPPP).
- If the above mitigation measures fail to properly control fugitive dust emissions, one or more of the following control measures may be applied:
- Physical or chemical stabilization will be applied to control dust on unpaved roads if necessary.
- Vehicle trips will be reduced if necessary.
- Construction employees will park in the lay down areas, which will be paved or graveled to reduce fugitive dust emissions.

4.2.2 Off-Site Transport

If off-site disposal of soil is required, vehicles used to transport bulk material with the potential to cause visible dust emissions will be tarped to cover the soil. Trucks carrying loose soil materials will be covered before they leave the construction site, and on-site vehicle speeds will be limited to 5 miles per hour (mph) or lower.

Vehicles will be checked to ensure that they are tarped, and to remove excess material on the shelf or exterior surfaces of the cargo compartment. Off-site haul trucks will access the construction site via paved access roads or established gravel pads. Site personnel will be stationed at the access point to monitor inflow/outflow to and from the site if necessary. They will be responsible for inspecting vehicles exiting and performing cleaning or sweeping of the tires as necessary.

4.3 Excavation and Earthmoving

Soil remediation activities will require impacted soil to be excavated and stockpiled in designated areas. Fugitive dust emissions from excavation and earthmoving activities will be managed using the following methods:

- Misting or spraying with water will be applied to manage dust generated from soil relocation and backfilling activities.

- Backfill material shall be watered as needed to maintain moisture. If required, backfill soil will be misted or sprayed with water prior to moving. Loader buckets shall be emptied slowly, and drop height from loader bucket will be minimized. Once backfill material is in place, water shall be applied to reduce potential dust emissions. A water truck or large hose shall be dedicated to backfilling equipment and operations.
- If affected soils cannot be covered by clean soil by the end of the work shift, the surface soil will be stabilized with dust palliative or covered with plastic sheeting.
- Should fugitive dust be visible during periods of sustained strong winds, earthmoving and excavating activities will cease or decrease until additional BMPs are applied and dust is no longer visible.
- Limit the areas subject to soil disturbing activities at any one time.

4.4 Soil Stockpiles

Both clean and slag-affected soils to be stockpiled on-site will be stockpiled in separate and distinct areas. Dust emissions for stockpiles will be controlled by using any combination of the following BMPs:

- Plastic sheeting;
- Applying water or a dust palliative;
- Contaminated soil stockpiles that are not scheduled to be disposed off-site or relocated on the same day should be covered at the end of the day with plastic tarps. Tarps are to be secured by placing rocks or other material in enough quantity so that the tarps remain in place during the wind expected at the site.

4.5 Windblown Visible Dust during Inactive Periods

The standards in this section apply on weekends, holidays, or other times when equipment and personnel are not performing soil-disturbing activities on-site. Should windblown visible dust plumes originating on the project site be observed, a sign will be posted at the jobsite with a telephone number of an appropriate person for the observer to notify of the condition. The “on-call” person receiving the call will mobilize appropriate mitigation crews to stop the visible dust generation as quickly as possible. Mitigation measures will be maintained until the visible dust plumes originating from the project site are minimized or eliminated.

5.0 AIR MONITORING

5.1 Overview

Real time monitoring will be conducted as outlined in the following monitoring program. Monitoring locations will initially be established based on anticipated prevailing wind directions at the site and will be adjusted if necessary to maintain the upwind and downwind locations.

During soil-disturbing activities, site controls will be evaluated based on real-time visible dust monitoring equipment. The on-site foreman or designated representative will carry handheld monitoring devices and personal air monitoring devices to monitor levels near the source of soil- disturbing activity. Stationary monitoring

devices will be placed at the site perimeter. A weather station will be placed at an appropriate place to record wind speed and direction.

Daily passive air sampling data will be retained for evaluation of BMPs. The primary purpose of the real-time air monitoring is to ensure worker health and safety and reduce the potential for COPCs to move beyond the site perimeter. If warranted based on data retrieved from the handheld or stationary monitoring devices, the personal air monitoring (PAM) devices may be submitted for laboratory analyses. The location and boundaries of the remedial areas to be excavated are illustrated in **Figure 2**.

Air quality action levels, which will be used to evaluate the collected data, are discussed in **Section 6.0**.

5.2 Air Monitoring

Metals can attach to soil particles and become airborne in dust. Handheld monitors (DataRAM PDR1000 or equivalent) will be used to verify in real-time that dust levels remain below particulate action levels (AL_C) for metals and PM10 in worker areas and at the site perimeter. Dust monitoring equipment such as the DataRAM PDR1000 can measure between the range of .001 to 400 mg/m^3 and shall be calibrated prior to use each day. Additionally, PM10 monitors will be placed at the site perimeter. Should PM10 levels be observed above the action levels as described in Section 6, PAM samplers worn by the site foreman or environmental professional and those placed at the site perimeter may be submitted for laboratory analyses and the current BMPs will be evaluated and adjusted as necessary.

5.3 Meteorological Monitoring

One Vantage Pro2 Plus Weather Station or equivalent will be used on-site to evaluate wind direction and speed. Meteorological data will be collected in conjunction with dust monitoring activities per the schedule described below. Data will be collected using a meteorological tower and data logger that will be erected at a height that is suitable for this project. Measurements will be taken approximately every half hour and logged to the data logger. Should the ambient data conflict with the present estimate of wind direction, the location(s) of perimeter air monitoring stations will be analyzed and may be modified as necessary. Wind speeds will be observed to assess if they are greater than 15 mph. Wind speed in excess of this level may trigger immediate modification of BMPs.

5.4 Air Monitoring Station Locations

Locations of the perimeter monitoring equipment are shown in **Figure 2**. The following summarizes the rationale for each perimeter monitoring device location:

- No. 1 – Provides monitoring in the anticipated up-wind direction.
- No. 2 – Provides monitoring in anticipated down-wind direction from site.
- No. 3 – Provides monitoring data anticipated perpendicular to the expected wind direction should winds change direction.
- No. 4 – Provides monitoring data anticipated perpendicular to the expected wind direction should winds change direction.

5.5 Background Air Monitoring

To establish background ambient dust levels in the site vicinity, the air monitoring stations and weather station will be set up at the site prior to the start of excavation activities or other site work that would disturb site soils. The air monitors will be run for one day to determine average ambient site conditions. This data will be used to calibrate action levels described below.

5.6 Monitoring Schedule

Dust monitoring will commence approximately 30 minutes prior to the start of each day of soil remediation activities. The monitoring stations will be check at a frequency of approximately once per hour. If analytical data from PAM results show that measured concentrations of COPCs are reasonably below PELs after the first week of remedial construction, dust monitoring effort may be reduced subject to ACEH approval.

5.7 Recordkeeping and Reporting

Dust monitors will be equipped with data loggers. The on-site foreman or environmental professional will document air management activities (visual observations, BMPs implemented, daily BMP inspection, etc.) in their daily logbook and by using the Air Sampling Field Data Form in **Appendix A**.

Monitoring will be performed and managed by the on-site foreman to ensure compliance with the provisions of this plan. Control of air monitoring and the implementation of BMPs will be the primary responsibility of the contractor performing the remediation at the site.

6.0 DUST MONITORING ACTION LEVELS

The following summarizes the regulatory basis for monitoring air quality action levels at the site and provides a comparison of these levels against levels of COPCs that are anticipated to occur in the air during the earthmoving activities for both workers and at the site perimeter. Two sets of action levels are developed. One will establish values for worker protection and is governed by California Department of Occupational Safety and Hazard Assessment (Cal-OSHA), the other establishes values for the adjacent community protection. Both will be described below.

6.1 Metals in Dust in Work Areas and at Site Perimeter

The Cal-OSHA PELs are used for developing action levels for metals in worker areas and at the site perimeter. A review of historical soil data at the site reveals two metals (arsenic and lead) to be COPCs. The maximum detected concentrations are presented in the table below.

Maximum Detected Concentration for COPCs

Metal	Boring ID	Date Sampled	Depth of Sample (ft bgs)	Maximum Analytical Result (mg/kg)
Lead	B-5d1.0	4/2/2014	1.0	1,400

The Cal-OSHA Permissible Exposure Limits (PELs) for metals in dust to be used in both the worker areas and the site perimeter are listed in following table.

PELs for Metals in Dust

Metal	PEL (mg/m^3)*
Lead	0.05

* = milligrams of substance per cubic meter of air at 25°C and 760mm Hg pressure.

6.2 Maximum Anticipated Concentration of COPCs in Dust

The equation below was used to estimate the maximum potential concentrations of metal COPCs in air that may occur at the site during remediation activities. This equation was taken from the *Preliminary Endangerment Assessment Guidance Manual, State of California Environmental Protection Agency, Department of Toxic Substances Control, Interim Final, Revised October 2013, Figure 2-10 Estimation of Air Concentration for Non-VOCs*. The calculated concentrations using this equation are included in the following table.

$$C_A = C_S \times PF$$

Where:
C_A = Estimated Concentration in the Air (mg/m^3)
C_S = Concentration in the Soil (mg/kg)
PF = Particulate Factor of $5x10^{-8}$ kg/m^3

The Particulate Factor combines two simplifying and conservative assumptions:

- Ambient air particulates are equal to the California Ambient Air Quality Standard for the annual average respirable portion (PM10) of suspended particulate matter present at a concentration of 50 micrograms per cubic meter ($\mu g/m^3$) (converted to $5x10^{-8}$ kg/m^3 using a 1,000,000,000 conversion factor between µg and kg).

- 100% of the particulates have the same metal contaminant concentration as the maximum soil value.

Based on California Ambient Air Quality Standards (AAQS), the table below lists the maximum concentrations of each metal COPC with the potential to become airborne during remedial activities at the site. Maximum soil concentrations are based on data presented in the SMP. The maximum anticipated air concentrations are calculated for both the maximum allowable particulate air concentration at the site perimeter areas CA (0.05 mg/m3) and the maximum allowable particulate air concentration for work areas CA-10 (10 mg/m3).

Calculated Maximum Concentrations of Metal COPCs in Dust

Constituent	C_S Maximum Concentration in Soil (mg/kg)	C_A Estimated Maximum Concentration in Air at 0.05 mg/m^3	C_{A-10} Estimated Maximum Concentration in Air at 10 mg/m^3
Lead	1,400	$7x10^{-5}$	0.014

6.3 Monitoring Action Levels for Metals in Dust

The real-time monitoring action levels (AL_C) are presented in the following table and are based on the equation below, which estimates at what level the COPC concentration in the air would approach the PELs. There are no corrections in the equation for statistical variance, since it is assumed that the maximum concentrations in the soil at the site are conservatively used to represent average site concentrations.

$$AL_C = (PEL \times 10^6) / C_S$$

Where:

AL_C = Calculated Action Level [milligrams per cubic meter (mg/m^3)]

PEL = Permissible Exposure Limit (mg/m^3)

C_S = Estimated Maximum Concentration in soil (mg/kg)

Note: 10^6 mg/kg - allows the conversion of units from mg/kg to mg/m^3

Maximum expected air concentrations that are based on the 10 mg/m^3 concentration for on-site nuisance dust will be used for comparison against PELs for on-site worker safety.

Action Levels for Worker Safety

Constituent	C_{A-10} Estimated Maximum Concentration in Dust for On-site Work Areas ** (mg/m^3)	PEL for On-site Workers (mg/m^3)	AL_C Real-time Monitoring Action Levels for Total Particulates in Dust in On-site Work Areas (mg/m^3)
Lead	0.014	0.05***	357

** Maximum concentration in air at 10 mg/m^3.

*** Above upgradient monitoring station value

The estimated AL_C levels presented in table above indicate that the acceptable worker levels for individual site COPCs would be greater than the OSHA nuisance limit of 10 mg/m^3. These data suggest that, provided the real-time particulate levels remain below the OSHA nuisance standard, individual chemical action levels in air will not be

exceeded. The estimated maximum concentrations of COPCs in the air (C_A) are below the individual constituent PELs listed in the Injury and Illness Prevention Program (IIPP) for the particulate concentration conditions. This calculation suggests that, the estimated maximum concentrations of COPC are not expected to exceed safe levels in the work areas or at the site perimeter during the remediation activities.

6.4 Worker Area Action Levels for PM10

The following discusses maximum air concentrations of COPCs expected at the site, as well as action levels for real-time particulate monitoring and chemical specific laboratory analysis.

Cal-OSHA has set a limit of 10 mg/m^3 for nuisance particulate dust in areas where workers may be exposed. Above this limit, engineering controls, administrative controls or Personal Protective Equipment (PPE) is necessary to prevent unacceptable exposure. If concentration of particulates exceed action levels, engineering controls (dust suppression using water, soil stabilizers, or delayed work) will be implemented to reduce particulate concentrations until dust levels can be reduced.

If particulate concentrations are detected above action levels at the worker area, additional engineering controls will be implemented to further reduce dust concentrations (e.g., increased watering). Work will stop if engineering controls cannot limit dust emissions to acceptable levels.

6.5 Perimeter Action Levels for PM10

In addition to action levels for metals contained in dust, there are also regulations for controlling PM10 as fugitive dust generated from earthmoving activity. The goal during remediation activities is no visible dust at the site perimeter. The following action levels will be established to manage and mitigate potential PM10 fugitive dust generation.

Action Level Summary Table

Visible Dust	Temporary stop work until additional dust control is applied
Wind reported above 15 MPH more than twice in a 30 minute period	Temporary stop work to evaluate dust control measure adequacy
Wind reported above 25 MPH more than twice in a 30 minute period	Stop excavation and soil movement activities except dust control until wind moderates
Perimeter Dust measured above 0.5 mg/m^3 (10 minute average)	Temporary stop work to evaluate dust control measure adequacy
Perimeter dust measured above 50 ug/m^3 over work shift	Stop work to evaluate and implement additional dust mitigation measures. Analyze downwind samples for lead.

7.0 REPORTING

Following completion of construction activities, a report will be prepared to document the successful completion of the soil remedial activities. The report will include a summary of the air monitoring activities described in this plan and will include data from the perimeter air monitoring activities as well as the results of samples submitted for lead analysis if necessary.

Figures

FIGURE 1
SITE LOCATION MAP

PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
1401006691P	NP	JH
DATE	REVIEWED BY	FILE NAME
4/23/14		CA13186

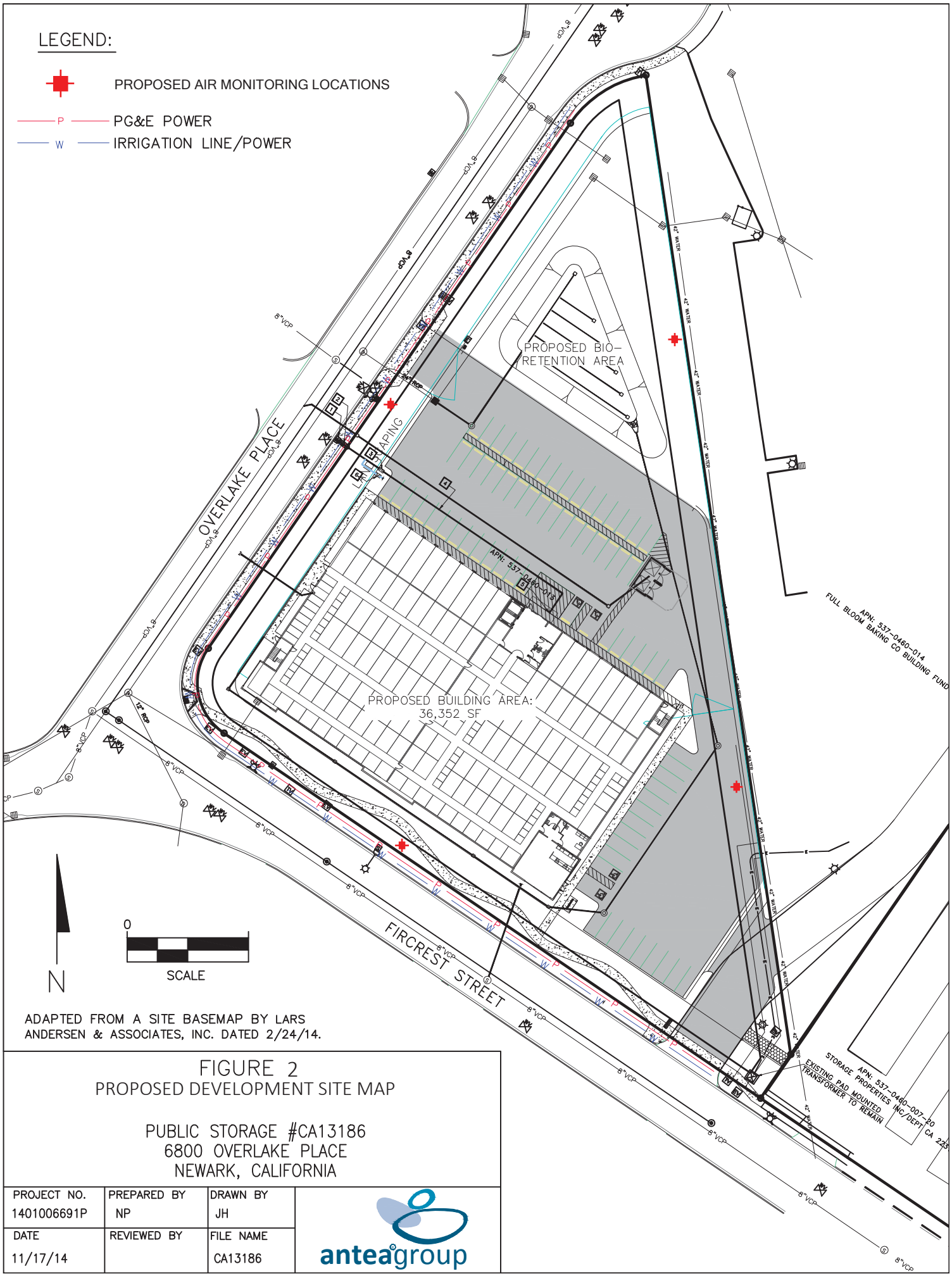
anteagroup

USGS 7.5 MINUTE TOPOGRAPHIC MAP, NEWARK QUADRANGLE (2012)

N

0 2000 FT

SCALE



ADAPTED FROM A SITE BASEMAP BY LARS ANDERSEN & ASSOCIATES, INC. DATED 2/24/14.

FIGURE 2
PROPOSED DEVELOPMENT SITE MAP

PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
1401006691P	NP	JH	
DATE	REVIEWED BY	FILE NAME	
11/17/14		CA13186	

anteagroup

Appendix A

Air Sampling Field Data Form

AIR MONITORING LOG

PROJECT NUMBER:		**EMPLOYEE NAME:**	
PROJECT NAME:		**DATE:**	

Equipment	Sampling For	Serial Number	Calibration Date/Time	Calibration Check Date/Time
Dust Monitor (DataRAM)				

Weather Conditions:	Temperature:		Relative Humidity:	

Sample Time (indicate am or pm)	Dust Monitor Reading (mg/m^3)	Wind Speed & Direction	PAM Sample Collected for Laboratory Analysis (Y/N)	Sample Location and Activity Occurring During Sampling	Comments, Including Breathing Zone or Area Sample, PPE Worn, and Actions Taken

AIR MONITORING LOG

Sample Time (indicate am or pm)	Dust Monitor Reading (mg/m^3)	Wind Speed & Direction	PAM Sample Collected for Laboratory Analysis (Y/N)	Sample Location and Activity Occurring During Sampling	Comments, Including Breathing Zone or Area Sample, PPE Worn, and Actions Taken

Appendix C

Post-Construction Cap Monitoring Plan

Post-Construction Cap Monitoring Plan

Public Storage #CA13186
6800 Overlake Place
Newark, California

Alameda County Environmental Health
Case No. RO0003136
GeoTracker Global ID: T10000006057

Antea Group Project No. PUBL57819
December 08, 2014

Prepared for:

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Post-Construction Cap Monitoring Plan

Public Storage #CA13186
6800 Overlake Place, Newark, CA
Alameda County Environmental Health Case No. RO0003136

1.0 POST-CONSTRUCTION CAP MONITORING PLAN OVERVIEW

1.1 Introduction

This Post-Construction Cap Monitoring Plan (CMP) has been prepared by Antea®Group on behalf of Public Storage Northern California Newark, Inc. (Public Storage) for a triangular shaped lot located at 6800 Overlake Place in Newark, California (site). This parcel is proposed for development of a new Public Storage facility. The Alameda County Assessor's parcel number for the site is 537 460 13 and the property size is approximately 3.06 acres.

Environmental investigations conducted during a Phase II Environmental Site Assessment dated September 5, 2014 identified the presence of slag-affected soil containing metals at concentrations above California Human Health Screening Levels (CHHSLs) established by the State Office of Environmental Health Hazard Assessment (California Environmental Protection Agency, January 2005), and Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (SFBRWCQB) (SFBRWQCB, December 2013) for Direct Exposure Soil Screening Levels for Construction/Trench Workers. These chemicals are referred to in this CMP as chemicals of potential concern (COPCs).

Therefore, to prevent exposure to COPCs in soil at the site, a barrier cap (cap) will be installed in accordance with the Soil Management Plan (SMP) and as approved by Alameda County Environmental Health (ACEH).

This CMP outlines the inspection and maintenance program for maintaining the integrity of the cap. The proposed site cap includes hardscape consisting of building concrete foundation slab, concrete sidewalks/walkways, asphalt concrete roads, and paved parking lots. In landscaping areas, slag-affected soil will be capped in place with a combination of geofabric, high-visibility construction mesh, and cobblestones, or topsoils and native soils which are not affected by slag. The construction of these elements is anticipated to be completed by the end of 2015.

1.2 CMP Goal and Objectives

Soil at the site has not been remediated to levels suitable for unrestricted use. Consequently, risk management procedures are required by ACEH to minimize potential exposures to COPCs in soil. The primary goal of the CMP is to prevent uncontrolled exposures to COPCs in soils and to protect the health of persons at the site. To accomplish this goal, the CMP will address the following objectives:

Establish an inspection and monitoring program to identify damaged cap systems and evaluate remedy effectiveness;

- Provide for timely repair and replacement needed to restore damaged cap systems;
- Minimize disturbances of COPC--affected soils;
- Provide record-keeping of inspections and repairs and reporting to ACEH.

1.3 Hazard Summary

Environmental investigations conducted at the site in 2014 revealed the presence of metals--affected fill material in shallow soils. The source of the metals is slag imported to the site historically as part of random fill that was placed over the native soil. Details of soil sampling investigations are presented in the Phase II ESA report dated September 5, 2014. Lead is the COPC found in the highest concentrations in the slag affected soil layer.

1.4 Personnel Roles and Responsibilities

Public Storage will designate a Project Coordinator who will implement the CMP at the site.
The responsibilities of the Project Coordinator are to:

- Facilitate implementation of the CMP.
- Be familiar with site conditions and cap systems installed at the site.
- Evaluate work orders to determine if work will intrude into COPC--affected soils or capped areas.
- Require that intrusive work at the site be conducted in accordance this CMP and the site SMP.
- Receive and submit notices, relevant documents, reports, approvals, decisions and pertinent communications to and from ACEH.
- Submit CMP and required reports, including the Annual Inspection Summary Reports.
- Review and sign the Annual Inspection Summary Reports.
- Facilitate communication of pertinent issues related to maintenance of the cap or maintenance of this CMP between Public Storage and ACEH, including notification in the event that unexpected exposures occur at the site.
- Conduct or supervise the annual or emergency inspections.
- Ensure that properly trained and knowledgeable staff conduct cap monitoring and maintenance activities. Communicate recommendations for necessary cap repairs to ACEH.
- Ensure that only properly trained workers perform excavation activities that have the potential to encounter slag affected soil.
- Prepare and sign Annual Inspection Summary reports.
- Review completion reports for intrusive activities and cap repairs.

2.0 SITE DESCRIPTION

The site located at 6800 Overlake Place in Newark, California and is approximately 3.06 acres. Figure 1 depicts the general location of the subject property, and Figure 2 depicts the subject property with the proposed Public Storage development layout and soil sample lead and arsenic data. The surrounding site use is commercial/industrial in the direct vicinity, and residential use approximately 550 feet to the east. Adjoining property use consists of an existing Public Storage facility to the southeast, a commercial baking facility to the east/northeast, an industrial facility to the northwest and commercial office buildings to the southwest. A drainage canal is located on the south side of Highway 84, approximately 1,000 feet north of the subject property.

The subject property currently remains vacant and undeveloped with the exception of a landscaped berm located along the property boundaries of Overlake Place and Fircrest Street. The landscaped berm is approximately four feet above street level.

3.0 SUMMARY OF CAP SYSTEMS

As summarized in the Site Management Plan (SMP) prepared for the site, remedial actions are necessary prior to redevelopment/occupancy in order to be protective of future commercial and industrial users. The selected remediation strategy includes the relocating and covering slag--affected fill soils under the proposed building, parking areas, and landscaping areas.

3.1 Long Term Cover Requirements

The site will incorporate long-term cover requirements to minimize daily direct contact with slag-affected soils. The cap system implemented at the site will be completed in accordance with the SMP and Public Storage's site redevelopment plans approved by the City of Newark. The specific cap materials installed at the site are summarized in the table below:

Summary of Cap

Area (Description)	Primary Materials	Minimum Thickness (inches)
Building	Concrete slab and footings,	6
Parking lots driveway and access roads	Asphalt concrete paving and aggregate base rock	6
Landscaping and Building vicinity	Concrete Sidewalks	2
Landscaping	Topsoil or non-slag affected native soil	24
Landscaping and other areas where clean soil cover is zero to 23 inches thick	Geofabric and high-visibility construction mesh plus cobble stones	4

Cap material locations at the site are shown on **Figure 2.**
Details and specifications of the geofabric and high-visibility construction mesh cap materials are shown on **Figure 3.**

4.0 MAINTENANCE AND INSPECTION ACTIVITIES

4.1 Inspections

The cap elements will be inspected on an annual basis until it is agreed with ACEH to be no longer required. Inspections will be conducted by staff appointed by the Project Coordinator who have been informed of the history of site investigation and remediation work, and are familiar with this CMP, the final locations of the slag affected soil on the site, and the four cap elements summarized in Section 3.1. Inspections will also be performed following unexpected events such as earthquake that cause cracking or rupture of the cap elements as described in Section 4.2, below.

The annual cap inspections will consist of a site walk and visual observations of the cap system elements. The inspector will document observations of the condition of the cap elements on an inspection form (**Appendix B**). Photographs will also be taken of questionable or deficient areas/elements potentially in need of repair. The inspection will include an evaluation as to whether the cap currently performs its intended function of minimizing direct contact with COPC-affected soils beneath the site. If the inspector believes the cap is not performing effectively as intended, appropriate corrective actions will be recommended (see Section 4.4).

The inspection will include the entire capped area. If present, the following features will be noted on the inspection form and in photographs:

- Cracking (longitudinal, alligator),
- Pull-apart from curb and gutters,
- Settlement or displacement,
- Erosional damage,
- Excessive or uneven settlement,
- Sloughing of edge materials,
- Seepage,
- Evidence of ponded water, and
- Other signs of damage, failure, or disturbance.

The inspection form will note the locations and approximate dimensions of the damage (e.g., area, crack width, crack length). The observed damage will be photographed. Annual Inspection Summary Reports will be prepared in accordance with Section 6.2.

4.2 Inspections Following Unplanned Events

Prompt action will be taken to prevent, abate, or minimize an emergency related to unplanned events such as a fire, earthquake, explosion, floods, or other unknown event that has the potential to cause exposure to COPCs at the site. The Project Coordinator will notify ACEH within 72 hours of such occurrence. Inspection observations and

recommendations for repair will be documented on the appropriate inspection form **(Appendix B)**. A report following the unplanned event shall be submitted in accordance with Section 6.3.

4.2.1 Earthquake Inspections

The site is located in a relatively active seismic area. It is located within 5 miles of the Hayward Fault and within an area of relatively high risk of liquefaction (USGS, Open File Report 02 296). Earthquake events can produce ground movement that could stress or damage cap elements.

The determination of when an earthquake inspection event should occur will therefore be based on visual observations of damage to the cap elements, beginning with verbal reports from site employees that an earthquake has been felt at the site. If obvious damage has been observed, the inspection event will be conducted as soon as practical following the event. If damage is not immediately observed, the Project Coordinator will determine if a thorough inspection is warranted.

4.3 Training

The Project Coordinator will provide training for employees, or contractors who perform maintenance or repair of cap elements to familiarize them with the proper methods and procedures to be followed when performing activities that affect cap elements. The Project Coordinator shall also require that workers, who may encounter subsurface soils, follow the instructions for intrusive subsurface activities described in the SMP.

No mitigation or protective measures are required for landscaping workers unless they are performing excavation to repair sprinklers, install or replace trees or bushes with deep roots systems or are otherwise expected to encounter slag affected soil if placed or remaining underneath landscaping areas.

4.4 Maintenance and Repair

The cap elements will be maintained in a manner that ensures its intended function to prevent exposure to -affected soils. If the Project Coordinator or his/her designated monitor believes the cap is not performing as effectively as intended, appropriate corrective actions will be recommended. Repairs will be made in accordance with the SMP as well as design specifications established in Public Storage site developments plans and geotechnical requirements. Public Storage shall notify ACEH at least five working days prior to disturbance of cap elements.

In the event that site activities unexpectedly result in breaching the cap system, the Project Coordinator will notify ACEH within 72 hours of receipt of that information.

4.5 Maintenance and Repair

Work conducted within the slag-affected areas will be conducted under a site-specific Health and Safety Plan (HASP) completed for potential exposure to metals affected soil as described in the SMP. Lead is the most likely COPCs found at levels exceeding regulatory soil screening levels. Workers who may be exposed to the COPC within slag-affected areas during the course of their work will have completed OSHA 40-hour HAZWOPER and annual refresher training (29 CFR 1910.120).

The HASP will identify the full suite of chemicals and maximum concentrations present in the -affected areas as well as worker exposure limits, health/physical hazards, exposure monitoring requirements, personal protection requirements, training requirements, documentation procedures, and inhalation exposure mitigation methods.

5.0 INTRUSIVE WORK ACTIVITIES

Activities that disturb the cap systems will require notification and approval by ACEH and will be conducted in accordance with the ACEH-approved SMP, a site-specific Health and Safety Plan and the Dust Mitigation and Air Monitoring Plan, if necessary. Examples of these potential activities include utility installation or relocation, utility line rupture or repair, building foundation maintenance or repair, building modifications, parking lot maintenance, repair or relocation, landscaping modification or maintenance activities below 24 inches depth. In the event of such work, the Project Coordinator will:

1. Notify ACEH of the type, cause, location and date of disturbances to the cap that could affect the ability of the cap to contain the underlying metals--affected soil.
2. At least 10 working days prior to proposed modifications/disruptions of the cap, provide ACEH with notification which will include a description of the work to be done, including the location of the proposed work and the reasons for the modifications/disruption.
3. Provide notification to ACEH within 10 working days following the completion of the modifications/repairs to the cap to demonstrate that the cap has been restored to specified design requirements. Section 6.4 describes the appropriate report content.

6.0 REPORTING AND RECORD KEEPING

6.1 Notification and Requirements

Public Storage will notify ACEH within 30 days after change or conveyance of ownership interest in the Property (excluding leases, mortgages, liens and other non-possessory encumbrances).

The Project Coordinator will notify ACEH as follows:

- Within 72 hours of an unplanned event that impacts or threatens to impact the integrity of the cap, as discussed in Section 4.2;

- Ten days prior to repair work and intrusive work activities that will affect the integrity of the cap, as discussed in Sections 4.1, 4.2, 4.4 and 6.0;
- Ten days following the completion of repairs to the cap, as discussed in Sections 4.1, 4.2, 4.4 and 6.0;
- Timeframes for submitting Annual Inspection Summary Reports, Unplanned Event Reports, Intrusive Work Reports, Sections 6.2-6.4.

If appropriate, notifications should include a proposed schedule for completing required repairs and maintenance.

6.2 Annual Inspection Summary Reports

The inspection findings will be documented in the inspection form (**Appendix B**) which will be submitted to ACEH by the Project Coordinator. The Project Coordinator will submit the Annual inspection form to ACEH by February first of the year following the inspection.

The Annual Inspection form will include the following content as needed:

- Dates, times, and names of those who conducted the inspection and reviewed the annual inspection report
- The observations that were the basis for the statements and conclusions in the annual inspection report.
- Descriptions of:
    - Actions taken during the reporting period, including repairs to the cap that were identified and implemented,
    - Significant changes in site conditions and usage, and
    - Onsite construction or other information that may relate to the cap or impact cap function;
- Description of actions planned or expected to be undertaken in the next year that will impact the caps if known;
- Conclusions regarding the on-going effectiveness of the cap;
- Description of maintenance or repairs identified as needed during the inspection;
- Description of requirements in this CMP that are not completed;
- Identify problems in complying with the requirements of this CMP;
- Recommendations for CMP modifications;
- Photographs depicting site conditions of concern if identified, with brief identifying captions or descriptions

6.3 Unplanned Event Reports

Within thirty days of the unplanned event the Project Coordinator will provide a report setting forth the conditions and events that occurred and the measures taken in response thereto.

6.4 Intrusive Work Reports

Work activities that contact affected soils beneath the cap will be documented in a Completion Report prepared and signed by the Project Coordinator. The report will include the following information:

- Dates work performed;
- Description of the location of the work;
- Description of the work performed, including restoration of cap systems;
- Work practices taken to prevent potential exposures;
- Variance or modifications (if any) of the approved SMP; and
- Summary of finished site conditions.

The Intrusive Work Report will be submitted within 60 days after the completion of the intrusive work.

7.0 VARIANCE FROM, OR MODIFICATION OF, CMP

The Project Coordinator may seek variance and/or modification of the CMP at any time during the life cycle of the cap remedy. "Variance" refers to possible release from specific individual CMP requirements for a limited time period, while "modification" refers to permanent revision of specific individual CMP requirements. When long-term performance of the selected cap remedies has been confirmed, the Project Coordinator may apply to ACEH to modify the requirements of the CMP based on site-specific monitoring results and conditions.

8.0 REFERENCES

U.S. Geological Survey (USGS). 2002, Revised 2010. Open File Report 02-296: Liquefaction Hazard and Shaking Amplification Maps of Alameda, Berkeley, Emeryville, Oakland, and Piedmont, California: A Digital Database. Available: http://pubs.usgs.gov/of/2002/of02-296/

9.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

Reviewed by:

Andrew Lojo, California Registered Professional Geologist No. 6034
Senior Consultant
Antea Group

Date: 2/18/15

Figures

FIGURE 1
SITE LOCATION MAP

PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
1401006691P	NP	JH
DATE	REVIEWED BY	FILE NAME
4/23/14		CA13186

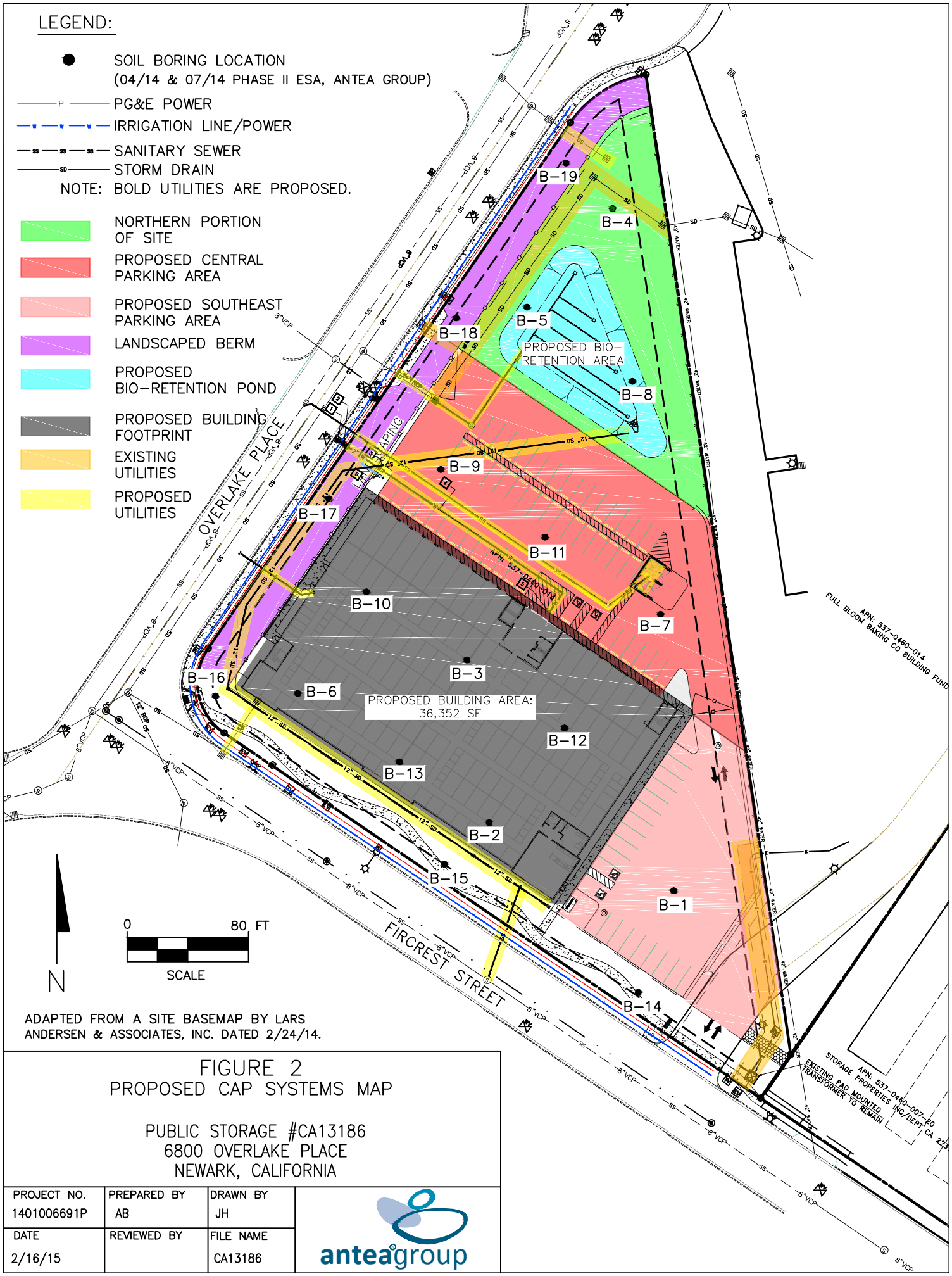
anteagroup

USGS 7.5 MINUTE TOPOGRAPHIC MAP, NEWARK QUADRANGLE (2012)

N

0 2000 FT

SCALE



ADAPTED FROM A SITE BASEMAP BY LARS ANDERSEN & ASSOCIATES, INC. DATED 2/24/14.

FIGURE 2
PROPOSED CAP SYSTEMS MAP

PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
1401006691P	AB	JH	
DATE	REVIEWED BY	FILE NAME	
2/16/15		CA13186	

antea group

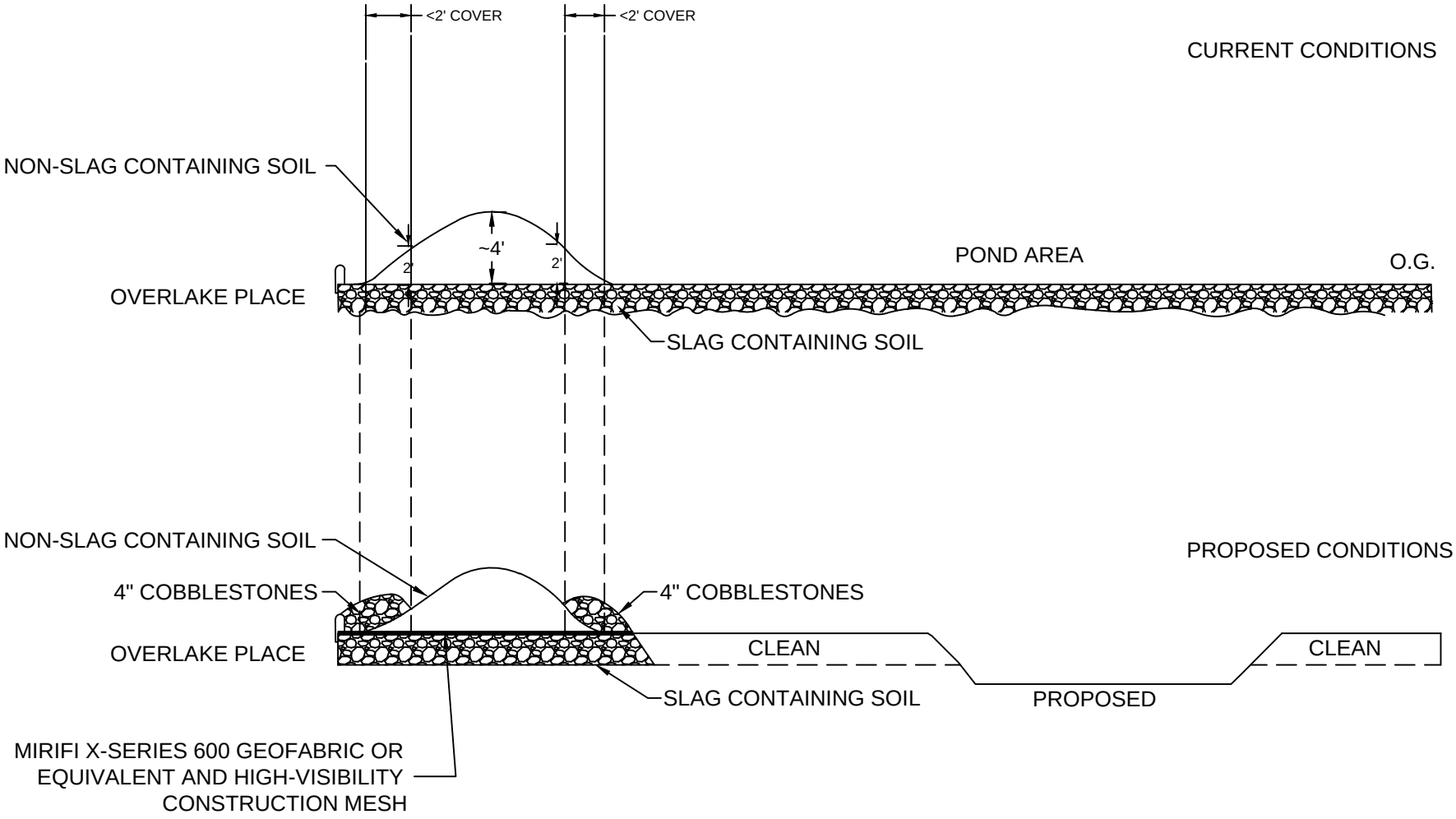


FIGURE 3
PROPOSED GEOFABRIC AND
CONSTRUCTION MESH CAP CROSS SECTION
PUBLIC STORAGE #CA13186
6800 OVERLAKE PLACE
NEWARK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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2/16/15		CA13186-Cross

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Appendix A

Cap System Inspection Forms

SITE INSPECTION CHECKLIST

INSPECTION INFO.

OWNER/TENANT:

PARCEL:

DATE:

INSPECTED BY:

ORGANIZATION:

TYPE OF INSPECTION

☐ ANNUAL

☐ POST-EARTHQUAKE

☐ OTHER

BUILDING & PAVED AREAS*:

AREA	CONDITION OF PAVEMENT OR OTHER SURFACE	
	☐ GOOD	☐ REPAIR NEEDED:
	☐ GOOD	☐ REPAIR NEEDED:
	☐ GOOD	☐ REPAIR NEEDED:

* Slag-affected soils must be covered with either buildings, pavement (driveway, parking lot, sidewalk); geofabric + high-visibility construction mesh + cobbles, or 24 inches of clean soil.

ADDITIONAL NOTES:

COMPLIANCE WITH LAND USE RESTRICTIONS	T	F
(1)	☐	☐
(2)	☐	☐
(3)	☐	☐

FOLLOW-UP INSPECTION

☐ NONE REQUIRED

☐ REASON:

DATE:

INSPECTED BY:

DESCRIBE REPAIR OR OTHER CORRECTIVE ACTION TAKEN:

SITE INSPECTION CHECKLIST

INSPECTION INFO.

OWNER/TENANT:

PARCEL:

DATE:

INSPECTED BY:

ORGANIZATION:

TYPE OF INSPECTION

☐ ANNUAL

☐ POST-EARTHQUAKE

☐ OTHER

LANDSCAPED/BIO-RETENTION AREAS*:

AREA	CONDITION OF LANDSCAPED AREAS	
	☐ GOOD	☐ REPAIR NEEDED:
	☐ GOOD	☐ REPAIR NEEDED:
	☐ GOOD	☐ REPAIR NEEDED:

*Slag-affected soils must be covered with either buildings, pavement (driveway, parking lot, sidewalk); geofabric + high-visibility construction mesh + cobbles, or 24 inches of clean soil.

ADDITIONAL NOTES:

COMPLIANCE WITH LAND USE RESTRICTIONS	T	F
(1)	☐	☐
(2)	☐	☐
(3)	☐	☐

FOLLOW-UP INSPECTION

☐ NONE REQUIRED

☐ REASON:

DATE:

INSPECTED BY:

DESCRIBE REPAIR OR OTHER CORRECTIVE ACTION TAKEN: