UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Via Email and U.S. Postal Service

JUL 22 2015

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Mrs. Debbie Olson, Executive Director
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Subject: Riverbank Army Ammunition Plant Polychlorinated Biphenyls (PCBs) – EPA Risk-Based Cleanup Approval, Toxic Substances Control Act, Phase 2 Work

Dear Mr. Switzer and Mrs. Olson:

Thank you for the February 6, 2015 letter submitted via email by the U.S. Army (Army) with its accompanying "Sampling and Analysis Plan" as the revised risk-based PCB cleanup application.[1] The U.S. Environmental Protection Agency Region 9 (EPA) required the application under 40 CFR 761.61(c). This application is for the Phase 2 PCB cleanup work (Phase 2 Work) to be conducted in the interior of buildings at the Riverbank Army Ammunition Plant (RAAP). In May and June 2015, EPA discussed the results of its review of the application with the Army and Weston Solutions, Inc. Subsequent to those discussions, Weston submitted (1) supplemental information that EPA requested and (2) proposed significant revisions to the application (Weston's June 26, 2015 email) via email.

EPA has considered the supplemental information and proposed revisions to the application and it is approving portions of the application as amended by the June 26, 2015 email. Enclosed is EPA's approval with conditions (Approval) consistent with requirements for risk-based disposal approvals in

[1] The original application was submitted by the U.S. Army in letter format dated June 26, 2014. Based on its review and substantial comments, EPA requested a revised application at a September 11, 2014 meeting with the U.S. Army and Local Redevelopment Authority.

40 CFR 761.61(c). As specified in the Applicability section, the Approval is only applicable to PCB remediation wastes inside buildings at the RAAP.

EPA is issuing the Approval jointly to the Army, as the current owner of the RAAP, and the Riverbank Local Redevelopment Authority (RLRA), as lessee and party responsible for operation, maintenance, and environmental cleanup of the RAAP.[2] Therefore, in this letter and the Approval, EPA refers jointly to the Army and the RLRA as the "Parties." The Parties must implement the Approval effective immediately.

On July 16, 2015 we shared draft conditions of approval with the Army and Weston. On July 21, 2015, we discussed with the Army and Weston specific issues related to the draft conditions. Specific conditions of approval were modified by EPA subsequent to that discussion. The Army and the RLRA may request in writing modifications to conditions of Approval consistent with Section VII of the Approval.

The Approval does not cover any PCB bulk products (e.g., Galbestos, paint) present in buildings at the RAAP. Based on EPA's review of information provided by Weston, PCB sources at the RAAP include Galbestos (wall and roof panels), paint, and oils from hydraulic and electrical equipment. Surfaces within the RAAP (e.g., concrete) are contaminated with PCBs from these sources and such surfaces are PCB remediation wastes. Soils and sediments at the RAAP are contaminated with PCBs; and these contaminated media are being addressed under EPA Superfund oversight. The Approval also does not cover any surfaces outside (e.g., court yards) the RAAP buildings that may be impacted by PCBs.

This Approval applies to and covers PCB remediation wastes inside RAAP buildings including cleanup and offsite disposal, interim actions (e.g., best management practices such as thorough cleaning) inside buildings to assure protection of tenants, land use restrictions, and long-term post-cleanup actions (thorough building cleaning, surface wipe and air sampling).

Finally, the PCB regulations in 40 CFR 761.61(c) require that EPA make a determination of no unreasonable risk of injury to health or the environment in connection to its risk-based cleanup approvals. While we believe the cleanup described in the application as modified by the Approval will meet the cleanup goals, we do not have enough data or information to make a final determination. Therefore, we are deferring a final written determination until after we receive the necessary data required in the Approval. If at that point we determine that additional cleanup actions are required, EPA will issue a supplemental approval to the Parties containing such requirements.

[2]The RLRA has subleased building space within the RAAP to about 11 tenants.

We look forward to the Parties implementing the Approval. If you have questions concerning this letter, or the enclosed Approval, call Carmen D. Santos, Region 9 PCB Coordinator, at 415.972.3360.

Sincerely,

Jeff Scott, Director
Land Division

Enclosures
Cc: John Woodyard, Weston Solutions, Inc.

JUL 22 2015

Enclosure 1

EPA Region 9 Toxic Substances Control Act PCB Cleanup Approval, 40 CFR 761.61(c)
Riverbank Army Ammunition Plant, Phase 2 PCB Cleanup Application

I. Introduction

On February 11, 2015, the U.S. Environmental Protection Agency Region 9 (EPA) received via email the U.S. Army's (Army's) February 6, 2015 letter (Subject: "Request for a Toxic Substances Control Act (TSCA) Risk-Based Approval; Phase 2 Building Decontamination and Panel Removal at the former Riverbank Army Ammunition Plant") intended to be the Army's revised application requested by EPA to be submitted consistent with 40 CFR 761.61(c), risk-based disposal approval. The revised application (including the "Sampling and Analysis Plan") is for the Phase 2 cleanup work (Phase 2 Work) to be conducted in buildings at the Riverbank Army Ammunition Plant (RAAP or "Facility").

In May and June 2015, EPA discussed its comments on the application with the Army and Weston Solutions, Inc. (Weston) as consultant for Riverbank Local Redevelopment Authority (RLRA). The Application was subsequently amended by Weston's June 26, 2015 email to EPA. EPA is approving portions of the revised amended application (Application) consistent with the requirements for risk-based disposal approvals in 40 CFR 761.61(c) and with the conditions established in Tables 1 and 2 of this Approval.

The RAAP is listed in EPA's Superfund National Priority List. The overall facility cleanup will be conducted by the Army and the RLRA with oversight by EPA's Superfund Program, Army Corp of Engineers, and other agencies such as the California Department of Toxic Substances Control (DTSC). The RAAP is a Base Realignment and Closure site and the Army plans on transferring the site to the RLRA through a no-cost Economic Development Conveyance.

II. Parties Implementing this Approval

The Army is the current owner of the RAAP. The RLRA is responsible, as of April 1, 2010, for the operation and maintenance of the RAAP via a lease agreement between the RLRA and the Army. The RLRA has sub-leased space within the RAAP buildings to about 11 tenants identified in the attached table. In addition, the Army privatized the cleanup of the RAAP and the RLRA is the party that will conduct the cleanup (including TSCA PCBs).

Therefore, EPA is issuing this Approval jointly to the Army, as the current owner of the RAAP, and the RLRA, as the party executing the cleanup. This Approval refers jointly to the Army and RLRA as the "Parties." The Parties are responsible for implementing this Approval and any future amendments that may be necessary. This Approval is effective immediately.

III. Facility Background and PCB Sources

The RAAP is located in the city of Riverbank, California. The Facility was built in 1942. In 1943 it began operations as an aluminum reduction plant for military supplies. The Facility closed in 1944 and was used as a storage facility until 1952. Norris Industries operated the Facility in 1952 under contract to the Army to produce cartridge cases for land and naval artillery. This production was going on during the Korean, Vietnam, and Middle East wars. The RAAP was closed on March 31, 2010; and several metal parts fabrication capabilities were transferred from the RAAP to the Army's Rock Island Arsenal facility in Illinois.

Based on limited information provided to EPA, sources of PCBs at the RAAP include Galbestos, paint, and oils in hydraulic, electrical, and compressor equipment.

IV. Applicability

A. PCB Bulk Product

The roof and walls of several buildings within the RAAP consist of Galbestos panels. PCBs as Aroclors 1260 and 1268 are present in Galbestos at the RAAP at levels above 50 milligram/kilogram (ppm). Paint inside the buildings (e.g. on the steel superstructures, walls) contain PCBs above 50 ppm. The Galbestos panels and paint (inside the buildings and possibly on certain equipment located in the buildings) are PCB bulk product. These materials are regulated for disposal without an EPA approval under 40 CFR 761.62(a) or (b); and 40 CFR 761.65(c)(9) establishes requirements for onsite storage of PCB bulk product waste to facilitate transportation for offsite disposal.

This approval is issued under 761.61(c) and only applies to PCB remediation wastes. The PCB regulations do not authorize the use of PCB bulk products. This Approval does not authorize the continued use of PCB bulk product in any building at the RAAP where those products are and/or may be present. This Approval does not cover and it is not applicable to any PCB bulk product that may remain at the RAAP. In addition, this Approval does not cover and it is not applicable to onsite storage of PCB bulk product waste (e.g., Galbestos panels) or any changes to the storage requirements established in 40 CFR 761.65 for that waste.

B. PCB Remediation Wastes

This Approval is applicable to and covers sampling, cleanup, and offsite disposal of PCB remediation wastes present inside buildings at the RAAP and PCB remediation wastes anticipated to be generated during cleanup of these buildings. Porous (e.g., concrete) and non-porous (e.g., metal) surfaces are contaminated inside buildings at the RAAP due to sources such as Galbestos, paint, and oils in hydraulic and electrical equipment that contain PCBs.

This Approval does not cover characterization sampling and cleanup of porous (e.g., concrete in exterior building court yards) and non porous (e.g., metal) surfaces that may be contaminated with PCBs outside the RAAP buildings. This Approval does not cover characterization sampling and cleanup of soil and sediments that may be contaminated with PCBs within and/or beyond the RAAP.

C. Sampling for Remedial Worker Safety

This Approval does not cover monitoring of workers involved in the PCB cleanup within or outside the exclusion zone and any type of sampling (e.g., air sampling) associated with work place monitoring in connection with those workers.

D. National Emission Standards for Hazardous Air Pollutants (NESHAPs) and Asbestos

This Approval does not cover any matters involving asbestos in Galbestos and NESHAPs or San Joaquin Valley Unified Air Pollution Control District requirements that may be applicable to Galbestos.

E. Cleanup of Fixed or Movable Equipment Inside RAAP Buildings

This Approval does not cover removal of bulk product from fixed or movable equipment still present inside buildings at the RAAP.

However, in order to determine disposal requirements applicable to equipment that may be coated with paint, sampling of the coating is covered by this Approval; and where applicable, sampling of the interior of the equipment (e.g., equipment that contains oil) is also covered. This sampling is also necessary to make reuse decisions concerning the equipment. The use authorization in 40 CFR 761.30(u) establishes that any person may use equipment previously contaminated with PCBs from regulated sources if such equipment is properly decontaminated consistent with certain provisions in the PCB regulations.

F. "Standards," Elements of the "application," and "application amendment"

The revised February 6, 2015 application and the June 26, 2015 application amendment refer to "standards" that will be applied to the cleanup of various surfaces. The PCB concentrations proposed in these documents for that purpose are not generally established standards but rather are risk-based cleanup levels or goals.

1. Application, Section 3.0 (Proposed Remedial Approach, Standards, and Sampling Frequency.

a. Interior Building Surface Cleaning – Above 8 feet. Removal and disposal of PCB bulk product (paint) is not covered by this Approval. PCB bulk product that may remain inside the buildings is not covered by this Approval. Cleanup levels for porous and non-porous substrates contaminated with PCBs (PCB remediation wastes) were superseded by the June 26, 2015 application amendment. EPA

is approving those levels with conditions. However, remediation of substrate above 8 feet was not proposed in the application and application amendment.

b. Interior Building Surface Cleaning - Below 8 feet. Removal and disposal of PCB bulk product (paint) is not covered by this Approval. Cleanup levels for porous and non-porous substrates contaminated with PCBs (PCB remediation wastes) were superseded by the June 26, 2015 application amendment. EPA is approving the June 26, 2015 cleanup levels with conditions. The "Remediation Methods" are not approved cleanup options and need further evaluation to prevent risks to tenants. EPA has requested a Cleanup Plan be submitted.

c. Floor Surfaces (concrete) and Pits and Trenches (concrete) inside buildings. The cleanup levels and sampling frequency for these surfaces are superseded by the June 26, 2015 application amendment. EPA is approving the cleanup levels with conditions. The "Remediation Methods" are not approved as characterization for concrete surfaces is incomplete and cleanup options need to be further evaluated to prevent risks to tenants. EPA has requested a Cleanup Plan be submitted.

d. Fixed Equipment (presses) inside buildings. 40 CFR 761.30(p) does not apply to equipment. Refer to Item IV.E, above. EPA has approved a cleanup level or goal and sampling frequency with conditions if the equipment is PCB remediation waste.

2. Application, Section 4.0, Galbestos Panel Removal and Disposal. This Approval does not cover removal, onsite storage, transportation, and offsite disposal of Galbestos (PCB bulk product). In addition, refer to Items IV.A, C, and D, above. Cleaning activities to remove dust are approved with conditions. Air monitoring outside building perimeter is not covered by this Approval except when upwind and downwind air sampling is necessary when conducting air sampling inside the buildings.

3. Application, Section 5.0, Air Monitoring and Decontamination Standards. The June 26, 2015 application amendment superseded air monitoring proposed in this section. EPA is approving air monitoring activities with conditions. The proposal to discharge water used during cleanup to the local Publicly Owned Treatment Works (POTW) based on a PCB level equal to or below 3 ug/L is not approved. The Parties must consult with the POTW before the water is discharged. Such discharge must be based on the POTWs permitted discharge limit for PCBs if more stringent than the TSCA PCB limit in 40 CFR 761.79 (b)(1)(ii).

4. Application, Section 6.0, Other Health and Safety Protocols. The Approval does not cover health and safety matters related to remediation workers and matters regulated by the Federal and state Occupational Safety and Health Administration.

5. Application, Section 7.0, Sampling and Analysis. This document was submitted in draft. The June 26, 2015 application amendment also applies to the sampling and analysis plan (SAP) attached to the application. Items IV.F.1 through F.4 apply to the SAP as the same issues are discussed in the SAP.

EPA is requiring that a final revised SAP be submitted that is responsive to certain conditions of this Approval.

6. Application, Section 8, Work Sequencing and Scheduling. This document was submitted in draft and with the exception of the work sequence, the document is repetitious of content included in the application and SAP. EPA has included conditions concerning the proposed work sequence.

7. Application, Long Term Restrictions and Monitoring. The Approval contains conditions that modify this section.

V. Conditions of Approval

Refer to the attached Table 1, General Conditions of Approval (Attachment 1) and Table 2, Specific Conditions of Approval (Attachment 2). The Conditions of Approval modify the application dated February 6, 2015 and accompanying draft Sampling and Analysis Plan and draft Sequence and Approach document attached to the Sampling and Analysis Plan; and the June 26, 2015 proposal for concrete, air, and surface sampling submitted by Weston to EPA via email.

VI. Compliance with this Approval and Applicable Regulations

The Parties must comply and implement all the conditions in this Approval.

This Approval does not relieve the Parties and their consultants from complying with other applicable TSCA PCB and Federal regulations, or state and local regulations and permits. Departure from this Approval without prior written permission from EPA may result in revocation of this Approval. If additional information demonstrates that EPA cannot make a no unreasonable risk determination, EPA will modify or revoke this Approval. Nothing in this Approval bars EPA from imposing penalties for violations of this Approval or for violations of other applicable TSCA PCB requirements or for activities not covered in this Approval.

This Approval does not cover further requirements that may be imposed by state (e.g., DTSC), county and local regulatory agencies, and EPA's Superfund Program regarding cleanup of PCBs at the RAAP or in relation to the PCB cleanup work covered by this Approval.

VII. Amendments to this Approval

The Parties may request in writing to EPA modifications to specific conditions in this Approval. In requesting a modification, include the reasons for the request and justification for a proposed modification. The Parties may schedule a conference call with EPA to discuss any proposed modification. EPA will make a decision on the request and discuss such decision with the Parties before the specific Condition of Approval is amended by EPA.

Riverbank Army Ammunition Plant – EPA Region 9 Conditional Approval for Phase 2 PCB Cleanup Work

Table 1: General Conditions of Approval

Elements of Approval Table 1: General Conditions	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
A. Revised Sampling Plan, Air Best Management Practices During Galbestos Removal, Real-Time Air Monitoring, Interim Actions, Post Cleanup Sampling	**1. Revised Sampling and Analysis Plan** a. Within 60 days after the date of this Approval submit a revised sampling and analysis plan (Revised SAP) that is responsive to all the conditions of approval involving sampling and analysis related to air, dust, porous, and non-porous surfaces. These Conditions include and may not be limited to Condition D in Table 1 of this Approval; and in Conditions B, C, D, E, G, and I in Table 2 of this Approval. **2. General Conditions for Air, Best Management Practices, and Interim Actions for EPA Approval** a. The air sampling elements of the Revised SAP must include information such as and not limited to data quality objectives, number of air samples for each phase described in the conditions that follow and presented in tables for each individual building within the RAAP, figures depicting sampling locations within tenant operational areas, list of all buildings where air sampling will be conducted, risk-based air levels to be achieved and specified in Condition D (Table 1) below, measures to prevent potential breakthrough of the PUF sampler and quartz filter, extraction and analytical methods, real-time air sampling methods, submission of real-time air sampling data when maximum air dust volumes are exceeded together with description of measures taken to lower dust levels, submission of preliminary laboratory data immediately after received by the Parties, submission of laboratory validated (Level 3) air data on CD-ROM within 30 days after validated, and description of best management practices (BMPs) to be implemented together with implementation schedule and number and type of samples associated with BMPs. **3. Before Removal of Galbestos, Paint, and Remaining Equipment** a. All tenant occupied buildings and areas with public access must be sampled. Indoor air, surface wipes, and bulk dust samples must be collected within tenant operational areas. EPA will use the data, to be collected via implementation of this condition, in making a no unreasonable risk determination. This data must be made available to EPA immediately as received by the Parties and identified as preliminary data. Level 3 validated data must be submitted to EPA within 30 days after the Parties' submission to EPA of preliminary indoor air, surface wipe, and bulk dust data. In addition, refer to Specific Conditions in Table 2 for more details.

Elements of Approval Table 1: General Conditions	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	4. During Removal of Galbestos, Paint, Cleaning of Equipment, and Cleanup a. Real-time monitoring for dust must be conducted in all tenant-occupied buildings (within tenant operational areas) and public access areas on a daily basis during removal of Galbestos, paint, and during cleanup (e.g., PCB remediation activities). This data must be submitted and summarized in the final cleanup completion report to EPA. However, if at any time throughout any given day the maximum allowed air dust volume is exceeded, preventative measures must be taken to protect tenants (and the public, if present) inside the buildings. In those instances, EPA should be notified the same day of the measures implemented by the Parties to assure tenants (and the public if present in the buildings) are protected. In addition, refer to Specific Conditions in Table 2 for more details. b. Interim actions including best management practices such as thorough cleaning must be conducted on a daily basis in all tenant-occupied buildings and public access areas. Surface wipe samples must be collected once a week from readily available surfaces. Depending on surface wipe results, air sampling may be necessary and required. In addition, refer to Specific Conditions in Table 2 for more details. c. Within 15 days after the date of this Approval, provide clarification on the measures that will be taken to isolate tenant-occupied areas during removal of Galbestos panels and paint. **5. Post Cleanup (Galbestos Removal, Paint Removal, and Equipment Cleaning Completed Before Cleanup)** a. Air samples must be collected from all buildings within the RAAP including tenant-occupied buildings and public access areas. b. Surface wipe (and bulk dust, if available) samples must be collected from all buildings within the RAAP including tenant occupied buildings and public access areas. c. Scope and schedule for long-term air sampling and best management practices (BMPs) must be provided by the parties within 45 days after post-cleanup sampling is completed. A frequency for surface wipe samples to be collected to verify effectiveness of BMPs must be included in the long-term air sampling and BMP plan. In addition to other data, this information will be used by EPA to develop specific long-term conditions to be incorporated into the LUC. The Parties may propose criteria to re-evaluate the need for additional sampling inside RAAP buildings at the end of the second year of the two-year post cleanup air sampling period. Third party validated

Elements of Approval Table 1: General Conditions	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	results of all sampling conducted during the two-year post-cleanup period must be evaluated and be used as part of the information to justify the reevaluation criteria.
B. Work Sequence	**1. Sequence and Approach** a. Within 15 days after the date of this approval, confirm the sequence for all the work that will be conducted including the PCB cleanup work. The sequence described in the application is not consistent with the sequence the Parties discussed with EPA during the June 2015 conference calls.
C. Waste Transportation and Routes, Disadvantage Communities	**1. Transportation Containers for Waste Containing PCBs** a. All waste must be placed in appropriate DOT containers for transportation consistent with all applicable requirements in 40 CFR 761 and including those in 40 CFR 761.65 and 40 CFR 761, Subpart K. **2. PCB Waste Transportation Routes and Environmental Justice** a. The Parties have estimated about 228 truckload loads will be necessary to remove the PCB waste from the RAAP. EPA strongly recommends that transportation routes be developed and proposed taking into consideration Environmental Justice concerns identified in the attached EJScreen report. As part of the route proposal, identify the commercial sites to where the wastes will be transported for offsite disposal. b. Consistent with EPA's Greener Cleanups Policy, we strongly recommend that construction equipment and trucks to be used for the transport of wastes from the RAAP to the disposal site be equipped with emission control technology. Please schedule a conference call with Karen Scheuerman of EPA (415-972-3356) to go over approaches the Parties may consider to reduce the carbon footprint associated with the PCB cleanup. **3. Notification of PCB Activity** a. Consistent with 40 CFR 761, the Parties must submit to EPA HQs the Notification of PCB Activity Form in 40 CFR 761.205. In this case the box in the form related to the transporter must be checked and the boxes in the form for generator and storage onsite may need to be checked depending on the site-specific situation.
D. PCB Risk-Based Cleanup Levels or Goals	**1. Porous Surfaces** a. Concrete: 5 milligram/kilogram (ppm) total PCBs. This cleanup level applies to all concrete surfaces inside buildings. Bulk samples must be collected from concrete surfaces using a 30-foot grid . Analysis results for bulk

Elements of Approval Table 1: General Conditions	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	concrete samples from individual surfaces (e.g., floors separate from one wall) must be used to calculate the 95% upper confidence limit (95% UCL or UCL) of the mean of the data. The UCL will be compared to the concrete cleanup level. If the UCL is equal to or below the cleanup level and the spatial distribution of the results do not suggest the need for recleaning any specific location(s) within the sampled surface area, additional cleanup will not be required. **2. Non-Porous Surfaces** a. Equipment: 5 micrograms total PCBs/100 centimeter square (5 ug total PCBs/100 cm sq.). Each sample will be compared to the cleanup goal of 5 ug /100 cm sq. If any given sample exceeds the cleanup level, additional cleanup must be conducted. b. Steel Structure Members: 5 ug total PCBs/100 cm sq. total PCBs. The 95% UCL of the mean of discrete surface wipe sample results will be calculated using ProUCL and the UCL compared to 5 ug total PCBs/100 cm. sq. If the UCL is equal to or below the UCL and the spatial distribution of the data does not suggest the need for recleaning any location(s) within the sampled surface area, additional cleanup will not be required. **3. Indoor Air Before and During Galbestos and Paint Removal and Equipment Cleaning** a. The air within the buildings must meet the risk-based level of 0.21 ug total PCBs/cubic meter of air (0.21 ug total PCBs/m^3). **4. Indoor Air Dust - Real Time Monitoring During Any Activity that Generates Dust (e.g., Galbestos, Paint Removal)** a. Real-time monitoring for dust in air must not exceed the lowest value for dust in air among the following: (1) a PCB-specific dust volume calculated consistent with Condition C in Table 2, (2) California Air Resources Board PM10 standard of 0.050 ug/m^3, (3) federal air standard for PM2.5. Real time monitoring must be conducted during the duration of the work day involving activities that may generate dust (e.g., paint removal, concrete cleanup activities). Real-time monitoring must be conducted within the operational areas of tenant leased and occupied areas. Refer to Condition C in Table 2 for details.

Elements of Approval Table 1: General Conditions	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	5. Indoor Air Cleanup Verification Sampling a. The air within the buildings must meet the 0.21 ug total PCBs/m^3 for industrial and commercial use. If future use of the RAAP is expanded to include office spaces, EPA may consider requiring the air RSL for unrestricted use of 0.0049 ug total PCBs/m^3 in those spaces.
E. Porous and Non-Porous Surfaces - Cleanup Inside Buildings	**1. Cleanup Plan for Building Interior** a. Within 30 days after receiving the laboratory analytical results for characterization of porous surfaces (e.g., concrete) required in this Approval and wipe and bulk samples associated with bare and coated non-porous surfaces, respectively; paint, and surfaces on currently or previously Army-owned equipment remaining at the RAAP planned for reuse and disposal, an outline describing the proposed cleanup method for porous (e.g., concrete), non-porous surfaces, and equipment must be proposed and submitted via email to Carmen Santos (santos.carmen@epa.gov). This proposal is for discussion with EPA before the actual final version of the cleanup plan is submitted to EPA for approval. EPA and the Parties will agree to the date to submit the final cleanup plan during discussion of the contents of such plan.
F. Land Use Covenant	**1. Remaining PCBs within RAAP Buildings** a. Within 90 days after EPA accepts the cleanup verification sampling data (i.e., third-party validated analytical results for concrete, non-porous surfaces, and air cleanup verification sample results), the Parties must submit to EPA a draft LUC. The draft LUC must include (1) provisions to address PCB contamination that may remain inside RAAP buildings and (2) plans for long-term monitoring and best management practices to be implemented inside RAAP buildings. Within the 90-day timeframe, the Parties must also confer and discuss with EPA the elements that will be included in the LUC.
G. PCB Cleanup Completion	**1. Final Report Documenting Completion of PCB Cleanup Inside Buildings** a. Within 45 days after the completion of cleanup (i.e., EPA has accepted third party validated analytical results for all cleanup verification samples), the Parties must submit a draft report documenting all the cleanup activities, achievement of cleanup goals or levels, PCBs remaining after cleanup, figures and maps depicting location and levels of PCB contamination remaining in RAAP buildings, tables summarizing all additional building and equipment characterization data, CD-ROM providing electronic copies of all laboratory analytical results for all samples collected under this approval, and waste disposal.

Riverbank Army Ammunition Plant – EPA Region 9 Conditional Approval for Phase 2 PCB Cleanup Work

Table 2: Specific Conditions of Approval

Elements of Approval Table 2: Specific	**Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)**
A. Written Certification	**1. Certification Required in 40 CFR 761.61(c)(1)** a. In accordance with 40 CFR 761.61(c)(1), the Parties must submit the written Certification consistent with 40 CFR 761.61(a)(3). The Certification must be signed by both the owner of the property (U.S. Army) and the cleanup party (RLRA).
B. Sampling Porous and Non-Porous Surfaces Inside Buildings	**1. Revised Sampling and Analysis Plan (Revised SAP) in General Condition A – Table 1** The Conditions below must be included in the Revised SAP required in General Condition A in Table 1 of this Approval. **2. Building Interior** a. The purpose of this sampling is to provide data to determine the extent of contamination in porous surfaces (e.g., concrete) and non-porous surfaces that may remain after initial cleaning of the surfaces. This data will also be used by the Parties to propose the cleanup plan required in Condition E.1 (Cleanup Plan), Table 1. This element of the Revised SAP must include figures depicting the 30-foot sampling grid (See Condition D.2.b in Table 2) for each building and tables summarizing the number of concrete samples that will be collected from concrete floors, walls, and columns from each building. The Revised SAP must clearly reflect EPA's modifications to the sampling grid; and concrete and surface (non-porous) sampling details. **3. Pre-Cleanup and Cleanup** a. All non-liquid samples such as concrete, paint, and wipe samples must be extracted via Soxhlet, EPA Method 3540C; and extraction followed by analysis via EPA Method 8082A. All results for concrete, paint, and other non-liquid samples must be reported as dry weight. b. Discrete dried paint samples must be collected from equipment and other surfaces where they are located at the RAAP to make reuse and disposal determinations (e.g., for the remaining equipment). At a minimum, each dried paint sample should consist of 30 to 50 grams. The paint samples must not be composited. The analytical laboratory must be instructed to properly pulverize and thoroughly homogenize paint samples before extraction.

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	c. Concrete samples must be collected by an applicable method in the EPA Region 1 Standard Operating Procedures for porous surfaces, May 5, 2011, or latest version. In reference to concrete, if concrete chip samples are collected, the analytical laboratory must be instructed to properly pulverize and thoroughly homogenize bulk chip samples before extraction. d. Refer to Condition D for modifications to concrete sampling proposed in Weston's email (attached). e. The required Revised SAP must include a list of all buildings at the RAAP that identifies all the buildings to be cleaned up under the Phase 2 risk-based cleanup. In addition, the list must include a justification for not including as part of the PCB cleanup any building the Parties believe need not be addressed under the Phase 2 cleanup work. **4. Risk-Based Cleanup Levels or Goals** a. Refer to Table 1, General Conditions of Approval. **5. Post-Cleanup Verification** a. All non-liquid post cleanup verification samples must be extracted via EPA Method 3540C. b. Air sampling must be conducted post cleanup to verify remaining PCB air levels and design best management practices and air and surface wipe sampling for the long term.
C. Air Sampling, Interim Actions, Real-Time Air Monitoring, and Best Management Practices	**1.** The Conditions that follow must be included in the Revised SAP required in General Condition A in Table 1 of this Approval. **2. Before Galbestos and Paint Removal** a. <u>All</u> tenant occupied buildings must be sampled; and the samples must be collected within each of the tenant operational areas. The air analysis results will be compared to the 0.21 micrograms total PCBs/cubic meter of air target concentration. b. Justification for collecting only one sample per occupied building must be provided within 15 days after the date of this Approval via email to Carmen Santos (santos.carmen@epa.gov). The justification must include a full

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	description of each building layout with figures and indicate if the building space is totally open and has no subdividing walls, and (2) explain what volume of air within one building will be represented by the one air sample proposed for collection within each building. Tenant spaces vary from 400 to 73,000 square feet. c. Air samples must be collected during a 24-hour period via Method TO-4A and a quartz filter attached to the TO-4A sampling train (PUF). d. The PUF and quartz filter must be individually extracted via EPA Method 3540C (Soxhlet); and each extract individually analyzed via EPA method 8082A. e. The air in all non-tenant occupied spaces that are currently not accessible to tenants and/or the public must be tested during post-cleanup verification sampling activities if those spaces are not planned for occupancy before cleanup activities are completed. **3. Interim Actions and Best Management Practices During Removal of Galbestos and Paint - Tenant-Occupied Spaces and Other Areas Accessible to Tenants and/or Public** a. Real time air sampling for PCB-containing dust must be conducted at each tenant-occupied building during the duration of the Galbestos removal activities. The PCB-specific maximum volume of dust within tenant operational areas not to be exceeded must be calculated using the attached formula. The PCB concentration to input into the formula must be the highest total PCB concentration (Aroclor 1260 plus Aroclor 1268) measured in Galbestos panels at the RAAP. In making this calculation, previous PCB concentrations measured in bulk dust (e.g., up to 384 ppm) should be considered. If the calculated not-to-exceed dust volume is exceeded at any time, the Parties must take actions protective of the tenants and their work spaces to reduce dust to below the not-to-exceed target volume. EPA strongly recommends the Parties consult on indoor and outdoor air sampling (e.g., PM10 and PM2.5, visible fugitive dust) at the RAAP with the local Air Quality Management District with jurisdiction in the city of Riverbank. The Air Quality Management District may have rules that specify air sampling requirements that may be more stringent than the air dust monitoring that EPA requires in this condition. This approval does not cover asbestos or other contaminants that may be present in indoor or outdoor air at the RAAP.

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	b. The Parties must implement **PCB best management practices** (BMPs) concurrent with Galbestos and paint removal activities. These BMPs include thorough cleaning of all surfaces where dust may deposit using HEPA equipped vacuums and cleaning of surfaces with wet cloths. Wipe samples must be collected from surfaces as part of the BMPs once a month at all areas occupied by tenants, and/or accessed by tenants or the public. **4. Interim Actions During Removal of Galbestos and Paint - Buildings or Areas not Occupied by Tenants and with No Access to Tenants and/or Public** a. If walls or other physical barriers do not fully and efficiently isolate the air in these buildings and/or areas within these buildings from the air volume in tenant-occupied areas and public access areas (if any), the Parties must conduct the BMPs required in Condition C.3.b in Table 2 of this Approval. However, if mixing of the air within unoccupied or no access buildings is efficiently prevented by physical means (e.g., walls that extend all the ceiling without gaps), the Parties must conduct the BMPs in Condition C.3.b in Table 2 of this Approval after removal of all Galbestos panels or upon tenant occupation of the space, whichever occurs first.
D. Concrete Verification Sampling and Cleanup	**1.** The Conditions that follow must be included in the Revised SAP required in General Condition A in Table 1 of this Approval. **2. Post Galbestos and Paint Removal** a. Within 60 days after the date of this approval, confirm via email the cleanup method for concrete. When selecting your cleanup method please consider that California is in a severe drought. Also refer to Condition E in Table 1. b. Concrete floors must be sampled following the grid described (30-foot spacing) and depicted in the attached figure and email from Weston, respectively, and as modified by this Condition. The grid must be extended to the area in the figure where only single samples in a row are shown and the grid is interrupted. Refer to Condition B (Sampling Plan) in this Table 2. c. Depending on the results of biased concrete sampling, EPA may require additional concrete floor samples.

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	d. The analytical results of all concrete floor samples (grid and biased samples) must be input into the Pro-UCL program to calculate the 95% upper confidence level (UCL) of the mean of the concrete analytical results. Refer to Condition D.1, Table 1 (General Conditions of Approval) for details. e. The spatial distribution of the analytical results for concrete floors in each building must be evaluated to determine if any results are clustered that may indicate an area needing further decontamination. f. A table that summarizes and a figure that depicts all analytical results for interior concrete floor surfaces at each building and exterior concrete surfaces must be provided together with a CD-ROM that contains the laboratory analytical reports and chain of custody forms. This information must be submitted to EPA within 30 days after the Parties receive the analytical laboratory results. g. Building walls and columns that are porous must be sampled using a sampling grid. The same grid that will be used for concrete floor sampling may be used for sampling the walls. The Parties may propose via email to Carmen Santos (santos.carmen@epa.gov) and within 60 days after the date of this Approval a different grid to sample building walls for discussion with EPA and to reach agreement on such grid. Concrete columns must be sampled following a grid or other applicable sampling method that yields representative samples for the size of the areas that will be sampled.
E. Steel Structure Cleanup and Verification Sampling	**1.** The Conditions that follow must be included in the Revised SAP required in General Condition A in Table 1 of this Approval. **2. Post Galbestos and Paint Removal** a. Within 60 days after the date of this approval, confirm via email to Carmen Santos (santos.carmen@epa.gov) the cleanup method for the steel structure. b. Discrete wipe samples must be collected at every 40 feet of steel member length. However, sample locations must be selected at random to allow for different sides of the surfaces to be sampled. Surface wipe analytical results must be equal to or below 5 ug total PCBs/100 cm. square. Refer to Condition B.3 (Table 2) for the sample extraction method that must be used.

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	c. The Parties must reclean accessible surfaces that may pose a direct risk of exposure to PCBs if wipe samples exceed 5 ug/100 cm square.
F. Remaining Equipment	**1. Inventory of Currently or Previously Army Owned Remaining Equipment at the RAAP** a. Within 45 days after the date of this approval, a complete inventory of all equipment remaining at the RAAP that may be contaminated with or contains PCBs must be submitted to EPA. The inventory must describe each item, construction material (e.g., metal), if the item is painted, analytical results for the paint/piece of equipment, and preliminary disposition of the equipment (i.e., disposal or reuse). In the preliminary disposal determinations, the Parties must identify whether the equipment is a PCB item (as defined in 40 CFR 761.3), PCB remediation waste, or PCB bulk product waste and include the disposal requirements that will be followed for disposal.
G. Equipment Surfaces Sampling, Disposal or Reuse	**1.** The Conditions that follow must be included in the Revised SAP required in General Condition A in Table 1 of this Approval. **2. Painted Equipment** a. Each piece of remaining equipment must be sampled separately. Discrete paint samples from the same piece of equipment may be composited and a maximum of three discrete paint samples may be composited. **3. Unpainted Equipment or Equipment with Paint Removed** a. Each piece of remaining equipment must be sampled separately. Discrete surface wipe samples from the same piece of equipment may be composited and the composite sample not to exceed three discrete wipe samples. For very large pieces of equipment (each piece weighs several tons), discrete wipe samples may be composited and a maximum of five (5) discrete samples may be composited.
H. On-Site Storage of Waste	**1. PCB Remediation Waste, Total PCBs equal to or above 50 ppm** a. PCB remediation waste must be stored consistent with the requirements in 40 CFR 761.65. Under this Approval, EPA is extending the 30-day (from the date of waste generation) timeframe in 40 CFR 761.65(c)(1) to store PCB remediation wastes in containers to 180 days (from the date of waste generation) provided all applicable requirements in that subparagraph and 40 CFR 761.65(c)(2) through (c)(6) are met.

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	All other applicable requirements in 40 CFR 761 including and not limited to labeling, marking, manifesting of the waste, notification of PCB activity (EPA Form 7710-53), and records must be followed in addition to all applicable state and local requirements. b. In this approval, EPA is extending the 30-day timeframe in 40 CFR 761.65(c)(1) to store liquid waste that may contain PCBs at levels equal to or above 50 ppm in tanks to 60 days after the date of generation provided all the applicable requirements in 40 CFR 761.65(c)(1) through (c)(6) are met and the containers are inspected daily and do not leak. **2. PCB Remediation Waste, Total PCBs below 50 ppm** a. EPA recommends storage of these wastes be conducted in same manner as in Condition H.1 (Table 2). **3. PCB Remediation Wastes, Water exceeding 0.5 ug total PCBs/L and containing less than 50 ppm PCBs** a. Storage of this waste must comply with all the applicable requirements in 40 CFR 761.65(c) in addition to all other applicable requirements in 40 CFR 761 including and not limited to labeling, marking, and manifesting, and all applicable state and local requirements. b. In this approval, EPA is extending the 30-day timeframe in 40 CFR 761.65(c)(1) to store liquid waste that may contain total PCBs at levels below 20 ppm (in this case, contaminated water) in DOT approved containers to 60 days after the date of generation provided all the applicable requirements in 40 CFR 761.65(c)(1) through (c)(6) are met and the containers are inspected daily and do not leak.
I. Disposal of Wastes Containing PCBs	**1. PCB Remediation Waste (e.g., concrete contaminated by PCBs from liquid or non-liquid sources)** a. These wastes must be characterized for disposal and disposed consistent with 40 CFR 761.61(a)(5) all other applicable requirements in 40 CFR 761 (not limited to labeling and marking); and applicable state and local requirements. b. If not sampled for disposal, PCB remediation waste may be disposed based on the assumption that PCBs are present at levels equal to or above 50 ppm. Also refer to Condition G in this Table 2. Each piece of equipment must be sampled separately. Discrete paint samples from the same piece of equipment may be composited and the composite sample not to exceed three discrete paint samples.

Elements of Approval Table 2: Specific	Conditions of Approval, Implementation by the Parties (U.S. Army and Riverbank Local Redevelopment Authority)
	2. PCB Cleanup Wastes a. These wastes must be disposed consistent with 40 CFR 761.61(a)(5) and all other applicable requirements in 40 CFR 761; and applicable state and local requirements. **3. Liquid PCB Remediation Wastes** a. Water to be generated during cleanup activities must be disposed consistent with the requirements in 40 CFR 761.61(b) or 761.79(b)(1); and other applicable requirements in 40 CFR 761; and applicable state and local requirements. The water must be analyzed for all the Aroclors, including Aroclor 1268. b. If paint and/or Galbestos particles are not removed from the water before storage of the water in tanks, the sediments in the tanks must be disposed as a PCB bulk product waste consistent with the applicable requirements in 40 CFR 761.62, any other applicable requirements in 40 CFR 761, and all applicable state and local requirements. **4. PCB Waste Generated During Removal of Paint** a. Waste generated during paint removal must be disposed consistent with applicable requirements in 40 CFR 761.79, other applicable requirements in 40 CFR 761, and all state and local applicable requirements.

Enclosure 2

EPA Region 9 – Formula to Calculate Dust Volume for Real-Time Monitoring

"Real-time dust monitoring should be used to assure that PCB levels in dust in air are maintained below risk-based levels. Real-time dust monitoring should be continuous during demolition operations and performed at locations that include those representative of potential maximum off-site dust concentrations. Real-time "background" dust-in-air concentrations may be subtracted from site-related measurements when determining compliance with risk-based limits on dust-in-air concentrations. "Background" dust-in-air concentrations must be measured in real time and compared to real time dust-in-air concentrations at "downwind" monitoring locations. Response to exceedances of project-related dust-in-air limits should be performed promptly.

Acceptable level of dust in air based on PCB concentration of 1 mg/kg in dust source may be calculated as follows, EPA will consider proposals for the use of other methods.

Cda = RfCd x 1E9 / Cca

Where

Cda = concentration of dust in air (ug/m3)
RfCd = Derived inhalation reference concentration (mg/m3)
Cca = Allowable PCB concentration in concrete (1 mg/kg)
1E9 = Unit conversion factor (ug/kg)

No inhalation RfC is published in IRIS, and so must be derived (RfCd) from the oral reference dose:

RfCd = RfDo x BW / IR

Where

RfDo = Oral reference dose (2E-5 mg/kg-da)
BW = Body weight (15 kg) (body weight used to develop soil RSLs)
IR = Inhalation rate (10 m3/day) (corresponds to body weight in EFH Tables 6-1 and 8-1)

Any air sampling for TO-10 analysis should use the nominally optional glass-fiber filter in the sample collection train. The glass-fiber filter and PUF sorbent should be analyzed separately for each air sample."

Enclosure 3

Santos, Carmen

From: Woodyard, John <John.Woodyard@WestonSolutions.com>
Sent: Friday, June 26, 2015 8:26 AM
To: Santos, Carmen; Armann, Steve
Cc: Warren.H.Switzer.civ@mail.mil; Orloski, Ed; Judy Flook; 'McAlister, James P SPK' (James.P.McAlister@usace.army.mil)
Subject: RBAAP Phase 2 Approval Cleanup Goals and Conditions

Carmen and Steve, thank you again for taking the time to discuss the RBAAP project with us several times this week. We sincerely appreciate your making this approval a priority.

Based on the outcome of those discussions, we respectfully propose the following cleanup goals and associated approval conditions at RBAAP:

Air monitoring:

- Same project standard as before during Phase 1 (0.2 ug/m3) using high volume sampling method TO-4A or -10A.
- Collect 1 round of air samples in 4 tenant-occupied areas before beginning work; compare with standard and previous results
- Collect 1 clearance air sample in each building after completion of all work.
- Collect 1 air sample in each occupied building 1 and 2 years after final building clearance sampling.

Concrete Sampling:

- Concrete project standard of 5 ppm UCL of mean, based on ProUCL analysis of data, by building.
- No maximum concentration limit
- Collect confirmation samples using a 30 ft square grid, grid starting location and orientation randomly selected (equivalent to 2 additional rows of samples instead of one, not down the middle)
- Collect additional biased concrete samples (assume 5 per building) in stained or cracked areas, probably before final cleaning, and results excluded from ProUCL calculation if concrete is removed.

Surface Sampling

- Surface sampling project standard for tenant space of 5 ug/100 cm2; exceedances to be investigated
- Wipe samples to be collected at ground level in tenant spaces on contact surfaces
- Collect 5 wipe samples per building in tenant spaces immediately after air clearance
- Collect 5 wipe samples per building in tenant spaces 1 and 2 years after air clearance.
- Use Soxhlet extraction for wipe samples

Carmen, as promised, we will also be getting you the following shortly:

- A map that overlays previous air sampling locations with occupied tenant spaces
- Any previous tenant wipe sample results

Please let me know if you have questions or need additional clarification. If these goals and conditions are acceptable, we look forward to receiving the approval documents soon so that Army project funding can be initiated on time.

John

John P. Woodyard, PE, QEP
Vice President
Weston Solutions, Inc.
300 Plaza Circle, #202
Mundelein, IL 60060

224-864-7220 Office
847-826-8131 Cell

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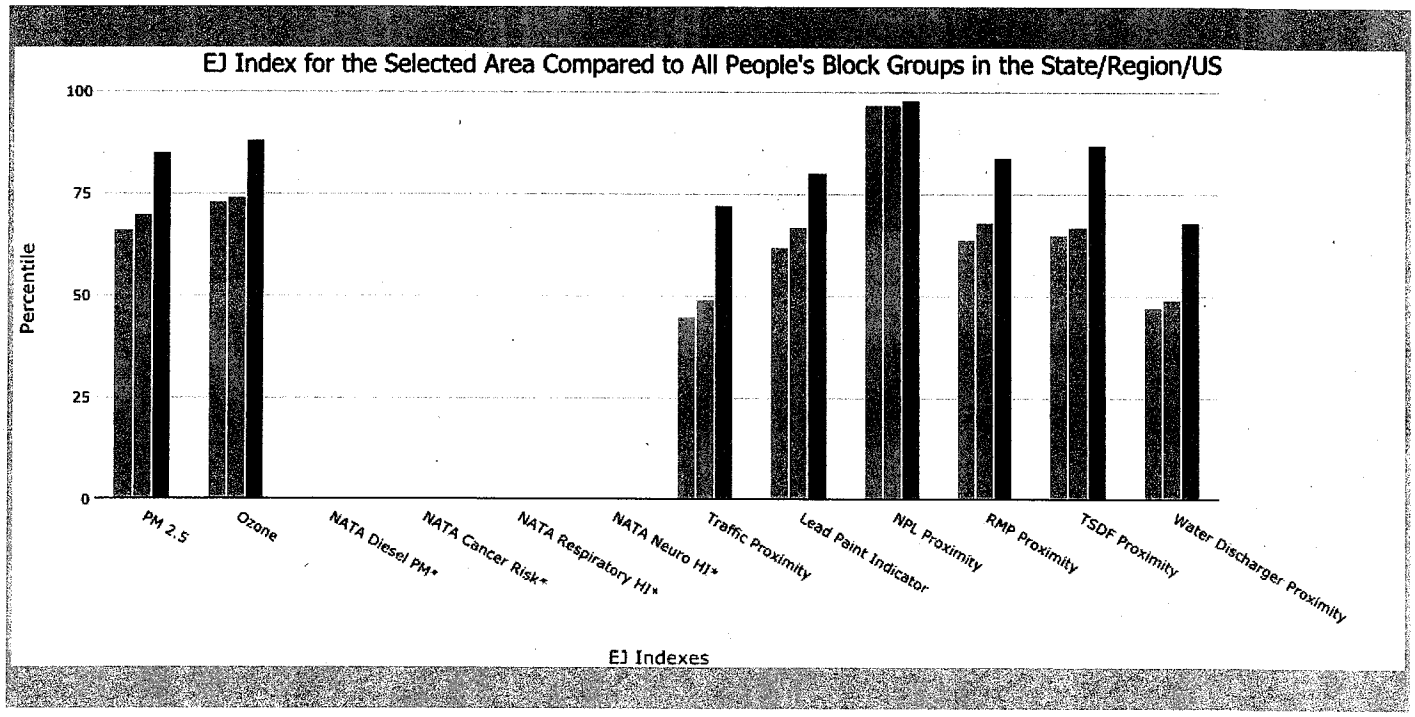
Enclosure 4

EJSCREEN Report

for 1 mile Ring Centered at 37.713702,-120.919181, CALIFORNIA, EPA Region 9

Approximate Population: 3287

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	66	70	85
EJ Index for Ozone	73	74	88
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	45	49	72
EJ Index for Lead Paint Indicator	62	67	80
EJ Index for Proximity to NPL sites	97	97	98
EJ Index for Proximity to RMP sites	64	68	84
EJ Index for Proximity to TSDFs	65	67	87
EJ Index for Proximity to Major Direct Dischargers	47	49	68



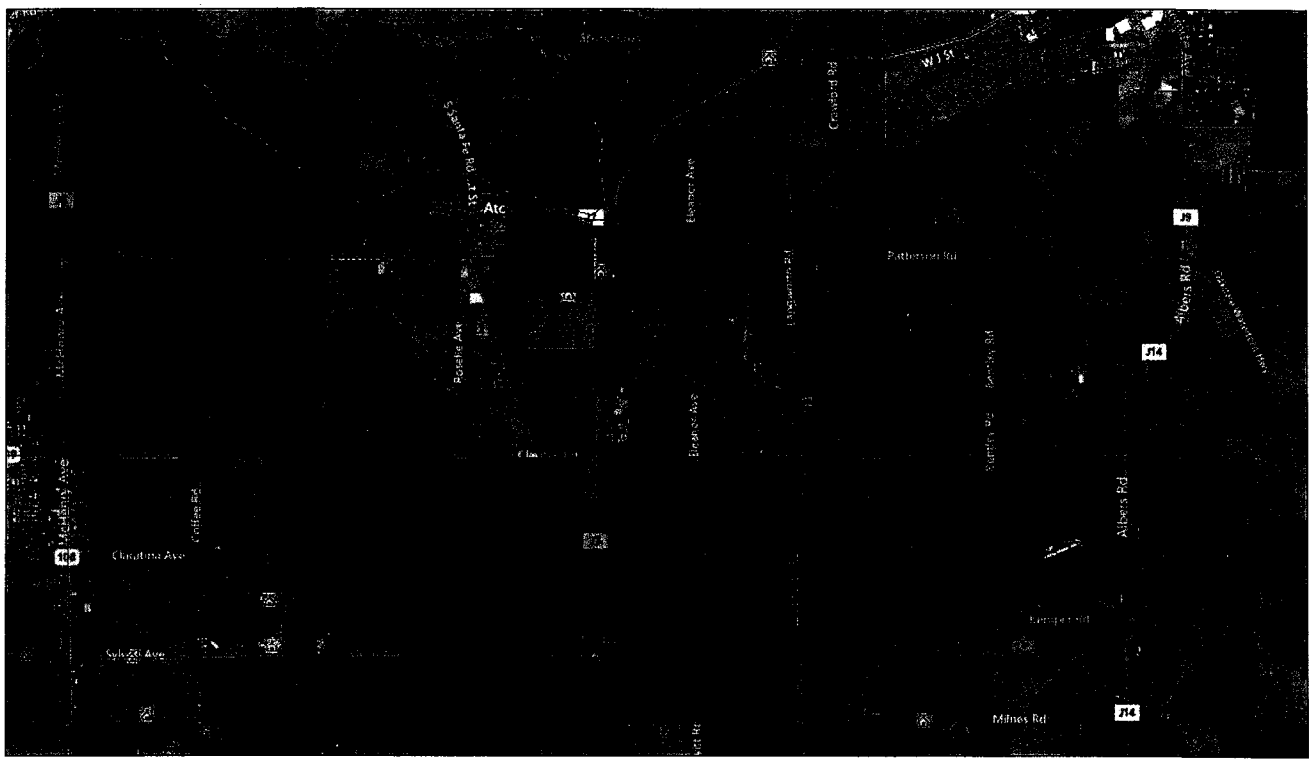
State Percentile Regional Percentile USA Percentile

This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report

for 1 mile Ring Centered at 37.713702,-120.919181, CALIFORNIA, EPA Region 9

Approximate Population: 3287



July 13, 2015

Digitized Point	Less than 50%ile	70 -80%ile	95 - 100%ile	Superfund	
Buffer Area	50 -60%ile	80 - 90%ile	Schools		
Data Not Available	60 -70%ile	90 - 95%ile			

1:72,224

0 0.5 1 2 mi

0 1 2 4 km

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EJSCREEN Report

for 1 mile Ring Centered at 37.713702,-120.919181, CALIFORNIA, EPA Region 9

Approximate Population: 3287

Selected Variables	Raw Data	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.95	10.4	42	9.95	53	9.78	50
Ozone (ppb)	54.2	48.4	70	49.7	63	46.1	89
NATA Diesel PM (µg/m^3)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Cancer Risk (lifetime risk per million)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	15	210	12	190	16	110	30
Lead Paint Indicator (% Pre-1960 Housing)	0.14	0.3	41	0.25	50	0.3	41
NPL Proximity (site count/km distance)	0.6	0.13	97	0.11	97	0.096	98
RMP Proximity (facility count/km distance)	0.24	0.46	58	0.41	62	0.31	69
TSDF Proximity (facility count/km distance)	0.054	0.13	43	0.12	46	0.054	75
Water Discharger Proximity (facility count/km distance)	0.029	0.18	5	0.19	6	0.25	4
Demographic Indicators							
Demographic Index	58%	47%	65	46%	67	35%	80
Minority Population	66%	60%	53	57%	57	36%	78
Low Income Population	50%	35%	73	35%	73	34%	76
Linguistically Isolated Population	17%	10%	75	9%	78	5%	90
Population With Less Than High School Education	31%	19%	74	18%	77	14%	88
Population Under 5 years of age	10%	7%	80	7%	80	7%	83
Population over 64 years of age	8%	12%	40	12%	40	13%	30

* The National-scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: http://www.epa.gov/ttn/atw/natamain/index.html.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.