

Abbreviated Analysis of Brownfield Cleanup Alternatives (ABCA) Construction of Regional Transit Light Rail Station – Twin Rivers Triangle Site (Triangle Housing Site Construction Access Cover)

Sacramento, CA

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and Redevelopment
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September 8, 2024



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NCE Project No. 402.15.55



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Abbreviated Analysis of Brownfield Cleanup Alternatives

Twin Rivers Triangle Site (Triangle Housing Site Construction Access Cover) for the Construction of the Dos Rios Regional Transit Light Rail Station

Sacramento, CA

September 17, 2024

Prepared for:

Sacramento Housing & Redevelopment Agency

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1 Introduction & Background

The Sacramento Housing and Redevelopment Agency (SHRA) currently owns 3.2 acres of vacant land between 12th and 16th Street just south of Richards Blvd in Sacramento California commonly known as the Triangle Site. The Sacramento Regional Transit District (RT) will be constructing the Dos Rios Light Rail Station on the 12th Street side (Parcel No. 001-0103-014) starting in the Fall of 2024. New affordable housing will be built along 16th Street, on the SHRA parcel known as the Triangle Housing Site (Parcel No. 001-0103-013), when the light rail station is completed. Combined these two parcels make up the Triangle Site.

SHRA and NCE have prepared this Abbreviated Analysis of Brownfield Cleanup Alternatives (ABCA) for the placement of an engineered protective cover (cover) over portions of the Triangle Housing Site, located at 550 North 16th Street (APN: 001-0103-013) in support of the upcoming construction of the RT Light Rail Station on the adjacent Light Rail Station Site, located at 1451 Sproule Avenue (APN: 001-0103-014). The Triangle Site is part of the planned Twin Rivers Dos Rios Transit Oriented Development in Sacramento, California.

The cover, as required by the California Department of the Toxic Substances Control (DTSC: Appendix A), the lead regulatory oversight agency, and will act as a protective separation barrier that will allow staging and transport of construction materials on the Triangle Housing Site. This staging area and access is required to construct the Dos Rios Light Rail Station on the Light Rail Station Site. Figure 1 shows the location of the Triangle Site and Figure 2 shows the Triangle Housing Site, planned cover area, and the RT Light Rail Station Site.

SHRA and DTSC have entered into a cleanup agreement under the California Land Reuse and Revitalization Act (CLRRRA) to remediate and redevelop the overall Triangle Site. This abbreviated ABCA is focused exclusively on the upcoming cover construction planned on the Triangle Housing Site that will support the RT Light Rail Station construction. The RT Light Rail Site was remediated in 2023 by removing near surface soils that were impacted with heavy metals.

1.1 Purpose

This abbreviated ABCA, necessary to obtain a U.S. Environmental Protection Agency (US EPA) Brownfields Revolving Loan Fund (BRLF) subgrant available through the City of Sacramento Office of Innovation and Economic Development (OIED), overviews site conditions and site mitigation objectives, and reviews mitigation alternatives. SHRA purchased the Triangle Site in July 2011 with the intention to (1) transfer the Light Rail Station Site to RT for construction of the light rail station, and (2) redevelop the Triangle Housing Site with residential units and possibly some ground floor retail space. As discussed in Section 2.0, cleanup of heavy metal impacts to near surface soils was performed for the Light Rail Site in 2023. Further environmental assessment, and subsequent cleanup activities for the Triangle Housing Site is planned to take place in the 2025 – 2026 timeframe.

Because the planned cover placement on the Triangle Housing Site does not consider or include any cleanup activities, we have modified the contents and title of this planning document and have included

“Abbreviated” in the title. *The term “Cleanup” has generally been replaced throughout this document with “Mitigation” referring to the engineering controls that have been required by the DTSC.*

Mitigation alternatives were evaluated based on the following criteria: effectiveness, feasibility of implementation, remedial costs, and general reasonableness. Based on this analysis, the recommended mitigation alternative for the Triangle Housing Site to support the planned RT Light Rail Station construction is the placement of the engineered cover as a separation layer. This alternative will meet the project goals and objectives, provide short-term effectiveness, is easily implemented, and supports the RT Light Rail Station planned construction. To be effective, construction of the cover will require coordination among the SHRA, the DTSC, RT, and RT’s contractor to ensure proper management of the process and maintenance, if required, of the cover to minimize any mixing and/or tracking of metals impacted soil from the Triangle Housing Site onto the Light Rail Station Site or onto the public right-of-way.

1.2 Background

Much of the background information provided in this ABCA has been developed by SHRA and their environmental consultant (Tetra Tech) who has performed the majority of the planning, assessment, and remedial engineering activities over the last 5 years leading up to the recent soil removal work conducted on the Light Rail Site in 2023. Tetra Tech also prepared a Draft ABCA for the cleanup activities on the Light Rail Station Site (Tetra Tech, 2019).

The currently undeveloped but fenced Triangle Site (including both the RT Light Rail property and the Triangle Housing Site), covers approximately 3.2 acres and encompasses two parcels. The Site is approximately 1 mile north of downtown Sacramento, California, and 1,000 feet southwest of the American River. It is bordered by North 12th Street, Sproule Avenue, and North 16th Street (Figures 1 and 2). The Triangle Site will be part of a larger commercial and residential development referred to as the Sacramento Twin Rivers Development, extending approximately 900 feet southwest of the Triangle Site.

Commercial and industrial activities occurred on the Triangle Site from the 1930s through 2005, when the structures were demolished. Historical uses included automotive and truck service and repair, and auto wrecking. The Triangle Site also reportedly received from 3 to 8 feet of import fill material at the time of development from nearby industrial properties.

1.3 Summary of Previous Studies

Several studies at the Triangle Site have occurred since 2013:

- Phase I Environmental Site Assessment (ESA) report prepared by NCE (Dec 3, 2013)
- Draft Phase II ESA report prepared by NCE (May 9, 2014)
- Phase I ESA report prepared by NCE (September 22, 2016)
- Phase II ESA report prepared by NCE (September 22, 2016)

- DRAFT Analysis of Brownfield Cleanup Alternatives (ABCA) Light Rail Property of the Twin Rivers Triangle Site prepared by Tetra Tech (October 16, 2019)
- Final Site Assessment Work Plan prepared by Tetra Tech (June 2020)
- Site Assessment Report prepared by Tetra Tech (March 2022)
- Response Plan for the Light Rail Station prepared by Tetra Tech (September 2022)
- Final Soil Gas Investigation Report prepared by Tetra Tech (March 2023)
- Response Action Completion Report for the Light Rail Station prepared by Tetra Tech (April 2024)

The 2013 Phase I ESA report covered most of the Triangle Site, omitting two small parcels at the southwest corner (parcel numbers 001-0103-010 and -008). The report concluded that past on-site and nearby off-site industrial uses could have impacted the Triangle Site. The Phase I ESA reported possible presence of one or more underground storage tanks (UST) within the northern portion of the Triangle Site.

The 2014 Phase II ESA report summarized a “limited soil investigation” across the same property assessed during the 2013 Phase I ESA. The site investigation included a geophysical survey to assess possible presence of a UST within the northern portion of the Triangle Property, excavation of test pits by use of a backhoe, and collection of soil samples for laboratory analyses for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPHs), polychlorinated biphenyls (PCBs), metals (total and dissolved), and asbestos.

The geophysical survey did not confirm the likely presence of a UST, but did detect small metallic objects. Artificial fill was identified across the Triangle Site, ranging in depth from 3 to 8 feet below ground surface (bgs). Near surface soil was found impacted by elevated concentrations of lead, arsenic and thallium.

The September 2016 Phase I ESA report conveyed the following findings: (1) fill material previously placed on the Triangle Site also had been placed on other nearby properties, and (2) that fill material contained elevated lead concentrations. The Phase I ESA also identified the possible presence of a UST at the southwest corner of the Triangle Site based on past use as an auto repair facility.

The September 2016 Phase II ESA involved geophysical surveys at the southwest and north corners of the Triangle Site to assess the presence of USTs, completion of 33 test pits to assess soil conditions and investigate subsurface anomalies identified by the geophysical surveys, collection of shallow soil samples for laboratory analysis, advancements of eight soil borings to depths between 20 and 28 feet bgs for collection of soil and groundwater samples for laboratory analysis, and collection of nine soil vapor samples at 5 feet bgs across the Triangle Site for VOC analysis.

The geophysical surveys identified no USTs. The test pits led to identification of buried debris, including demolition debris, in some areas. Debris included three 55-gallon drums at one location within the southwest portion of the Triangle Site, east of the southern portion of the Triangle Housing Site. Shallow soil sampling revealed impacts on surface soil of arsenic and lead, and, of less concern, thallium. Several soil samples analyzed for soluble lead were found to exceed State of California Title 22 criteria for off-

site disposal as a hazardous waste. Groundwater sample results did not indicate impacts of VOCs, SVOCs, TPH, or metals. Some reporting limits for metals exceeded regulatory screening levels. Soil vapor sample results indicated detection of a lone and non-target compound at concentration well below its regulatory screening level; no other analytes were detected.

Beginning in 2019, Tetra Tech was retained by SHRA to prepare site assessment work plans and planning documents as required by the DTSC and EPA for compliance with certain funding requirements. Site assessment work was performed over the entire Triangle Site resulting in a Site Assessment Report and a Final Soil Gas Report that addressed the entirety of the Triangle Site.

In 2022, Tetra Tech began planning efforts associated with the needed soil removal activities specific to the Light Rail Station Site. These remedial planning efforts were specific only to the Light Rail Station Site. A response plan was prepared and approved by the DTSC in 2022 and remedial activities consisting of soil excavation, off-site disposal, and confirmation sampling took place in 2023. The remedial efforts were to reduce levels of lead and arsenic in near surface soils.

Remedial objectives were initially established for the soil removal work for respective target metals on the Light Rail Station Site and were set at State established screening levels for a residential setting, but were later revised to with remedial action goals for commercial use as no residential development would occur on the Light Rail Station Site. The initial response action goal (RAG) for arsenic in the Response Plan Light Rail Property (Tetra Tech 2022b) was 9.0 milligrams per kilogram (mg/kg), based on estimated background concentration at the Site, and for lead was 80 mg/kg, based on the DTSC screening level (SL) for residential use, which was later revised to 500 mg/kg for commercial/industrial use.

The soil removal activities were conducted in 2023 and the Remedial Action Completion Report (RACR) was submitted in April 2024. DTSC provided a conditional approval of the RACR in April 2024.

1.4 Project Goals

The following project goals for construction of the cover will incorporate local regulatory ordinances and standards along with best management practices for storm water management:

- Placement of the engineered separation cover layer in accordance with the SHRA project specifications (Appendix B).
- Maintenance of the cover as needed throughout the RT Station construction activities.
- Allow access from the public right-of-way onto the light rail property and access to areas of the Triangle Housing Site for staging to support the light rail station construction.

2 Applicable Cleanup Regulations and Standards

As previously mentioned, there is no planned cleanup associated with this specific work associated with the placement of the engineered separation cover layer on the Triangle Housing Site.

2.1 Responsibility for Site Oversight

SHRA and DTSC have entered into a CLRRRA agreement for cleanup and redevelopment of the Triangle Site, including the Triangle Housing Site Property. The CLRRRA provides certain liability protections to SHRA to encourage cleanup and redevelopment of blighted contaminated properties. The law establishes a process for eligible property owners to obtain immunities, conduct site assessments, and implement response actions as necessary to ensure eligibility of the property for reuse or redevelopment. DTSC is the lead regulatory agency to oversee the CLRRRA process and cleanup of the Triangle Site, including the Triangle Housing Site. SHRA has also engaged the services of a qualified contractor (Pacific States Environmental) to implement the construction of the separation cover layer. SHRA retained NCE to prepare this Abbreviated ABCA to help facilitate EPA funding assistance for the cover installation. NCE employs licensed professional geologists (PG), licensed professional engineers (PE), and qualified All-Appropriate Inquiry (AAI) Environmental Professionals.

It is anticipated that the RT Light Rail construction will take approximately two years. Compliance with the Revised Site Management Plan (Tetra Tech, 2023b) associated with the construction of the Light Rail Station, and maintenance of the cover, will be the responsibility of RT's contractor (DMZ Builders) and their environmental consultant (Millennium Environmental). SHRA will also conduct routine maintenance related inspections of the cover.

2.2 Cleanup Standards

No cleanup standards are applicable for the work that will be performed. The work includes the construction of an engineered separation cover layer to mitigate near surface soil mixing and tracking of impacted soils from the Triangle Housing Site onto recently remediated portions of the RT Site and/or onto public rights-of-way.

2.3 Laws and Regulations Applicable

The work to be conducted over the Triangle Housing Site does not include any cleanup, excavation of contaminated soils, confirmation sampling or disposal of any wastes. Construction of the engineered separation cover layer is required to mitigate mixing of near surface soils between the Light Rail Station and Triangle Housing Sites during construction of the Regional Transit Light Rail Station. SHRA will allow access through the SHRA property to the RT contractors and will also allow for portions of the SHRA parcels to be used as construction lay-down areas.

SHRA has contracted with Pacific States Environmental to construct the engineered separation cover layer. SHRA provided project plans and specifications that will guide the work (Appendix B). The bidding documents require that the contractor obtain appropriate permits from the local agencies for the construction effort. This includes fulfilling permitting requirements where warranted for:

- BMPs associated with storm water pollution prevention
- Grading Permits as required by the City of Sacramento

2.4 Climate Change Considerations

Topography and climate in Northern California vary dramatically. The Sacramento area has a Mediterranean climate, characterized by wet winters and hot, dry summers. Temperatures typically vary from 39 to 94 degrees Fahrenheit (°F), with occasional extremes to below 31°F or above 102°F. Since the beginning of the 20th century, temperatures have risen approximately 2°F in Northern California. Potential effects of climate change on Northern California include flooding from extreme precipitation and drought associated with reduction in the snowpack. Increasing temperatures raise concerns about sea level rise in coastal areas.

The Triangle Housing Site is not directly or significantly susceptible to impacts of climate change. The Triangle Housing Site is not near the coast and would not be impacted by drought conditions. According to Federal Emergency Management Agency Flood Maps, the Triangle Housing Site is within an area of reduced flood risk due to protection by a levee system. The flood insurance rate zone of the Triangle Housing Site corresponds to areas outside the 100-year floodplain or areas protected from the 100-year flood by levees (Tetra Tech, 2019).

3 Identification of Potential Mitigation Alternatives

Based on the Site conditions, the need to provide for and allow access across the Triangle Housing Site to the Light Rail Station construction site, and planned timing of the construction activities, the DTSC has required that the Engineered Separation Cover layer be placed and maintained throughout the construction of the Light Rail Station. Only the No Action Alternative was evaluated and compared to the Engineered Separation Cover layer mitigation alternative.

3.1 Alternative 1 – No Action

This alternative would involve no consideration of a protective layer on the Triangle Housing Site. This would result in the potential for the tracking and mixing of near surface soils from the Triangle Housing Site (yet to be remediated) onto the Light Rail Station Site (recently remediated). A No Action approach would not be in compliance with requirements being mandated by the DTSC. No Action would entail no further response actions of any type, including administrative controls or monitoring. The No Action alternative is retained as a basis for comparison with other mitigation alternatives.

3.2 Alternative 2 – Engineered Separation Cover Layer

This alternative includes the placement of an engineered separation cover layer over portions of the Triangle Housing Site to support access and material laydown associated with the construction of the adjacent light rail station. The purpose of the cover layer is to provide a protective 'cover' over that portion of the soil on the Triangle Housing Site that contains elevated levels of lead and arsenic. This area is shown in Figure 2. The cover will consist of compacted Class II aggregate base rock installed over a geo-textile filter fabric and is intended to act as a protective barrier that will allow staging and transport of construction materials on the Triangle Housing Site as will be required to construct the Dos Rios Light Rail Station on the Light Rail Station Site.

The general scope of work for cover installation includes:

- Mow weeds and remove vegetation contained within the entirety of the Triangle Housing Site.
- Compact the existing ground surfaces that will comprise the cover with 2 passes of riding/vibrating roller to 90% compaction.
- Place filter fabric over the compacted areas. Fabric shall consist of Mirafi 500X (or equivalent) woven geotextile made of permeable polypropylene with minimum tensile strength of 200 lbs.
- Place and compact a 5-inch lift of ¾-inch Class II aggregate base meeting State of California Standard Specification, Section 26.
- Total area of cover is expected to be 69,065 SF.

3.3 Evaluation of Mitigation Alternatives

Potential mitigation alternatives were evaluated according to the following criteria: effectiveness, feasibility of implementation, remedial costs, and general reasonableness. Capital and O&M cost estimates are order-of-magnitude-level estimates for comparison purposes, and expected accuracy of those estimates ranges from minus 30 to plus 50 percent.

3.3.1 Alternative 1 – No Action

- *Effectiveness* – The No Action Alternative would not be effective because it would do nothing to address the potential mobility of contamination on site. It also would not facilitate site access and construction activities during potential rain events as construction is planned to begin during the rainy season.
- *Implementation Feasibility* – This alternative would be easily implemented.
- *Remedial Costs* – No cost would be necessary for this alternative. Potential contractor downtime charges due to unsuitable site conditions could add to overall costs.
- *General Reasonableness* – This alternative would provide no short-term management of the Triangle Housing Site's contamination, would not allow for reasonable construction site access without tracking of contaminated soils, and would effectively prohibit construction of the light rail station under the current schedule. As a result, this is not a reasonable mitigation option.

3.3.2 Alternative 2 – Engineered Separation Cover Layer

Effectiveness – Construction of the planned separation cover layer as required by the DTSC and as shown in detail in Appendix B, will provide the needed engineering controls allowing the Triangle Housing Site to be used and construction laydown and access to the RT Light Rail construction project. The separation layer will help with site logistics and site cleanliness should rain events occur during the construction period. More importantly, it will eliminate the potential of mixing and tracking of potentially heavy metal impacted soil that exist on the Triangle Housing Site to other areas of the Light Rail Station Site and/or into the public right-of-way.

Implementation Feasibility – This alternative would be easily implemented by application of standard construction methods. It would require construction of the engineered cover by a licensed general contractor following the specifications and layout shown in Appendix B. Construction time frame is estimated at approximately 2-3 weeks.

Mitigation Costs – Estimates of capital cost, annual O&M cost for 2 years, and removal of the cover material are as follows:

- Capital Cost: \$160,000
- Annual O&M Cost \$5,000 X 2 = \$10,000
- Removal Cost: \$30,000

3.4 Recommended Mitigation Alternative




The recommended mitigation alternative to allow for the use of the Triangle Housing Site as laydown and access to the RT Light Rail construction project is Alternative 2 – Engineered Separation Cover Layer. This alternative will eliminate exposure pathways to construction workers, allow for more efficient movement of equipment around the site during storm events, and eliminate the potential for mixing of near surface contaminated soil and potential tracking of those soils on to the recently remediated Light Rail Station Site and/or off-site into the public right-of-way.

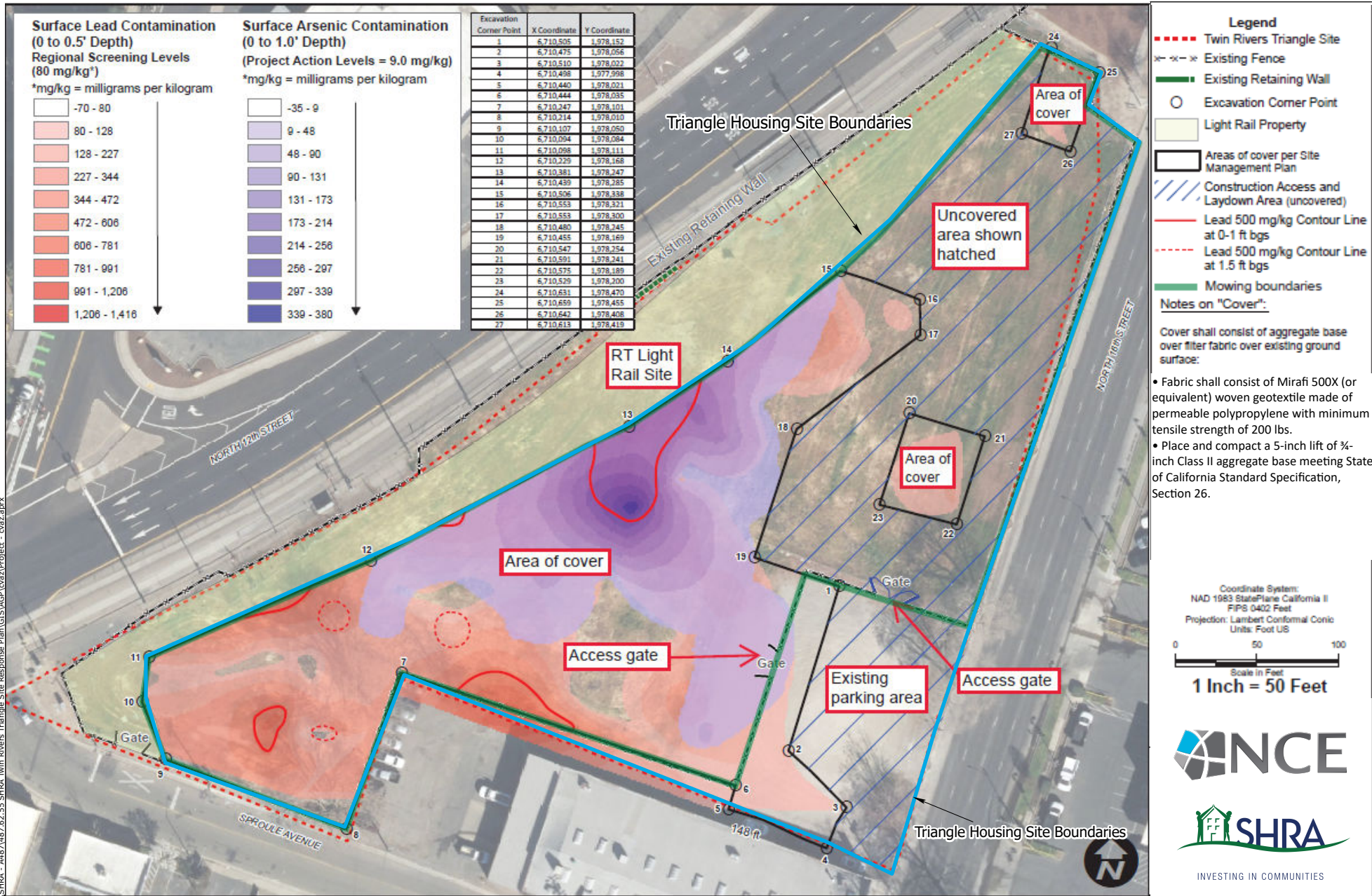
4 References

- Nichols Consulting Engineers, Chtd. 2013. Phase I Environmental Site Assessment (ESA), Dos Rios Transit Oriented Development Project, Sproule Avenue and North 12th Street, Sacramento, Sacramento County, California 95811. December 3.
- NCE. 2014. Report of Findings, Limited Phase II Environmental Site Assessment (ESA), Dos Rios Transit Oriented Development Project, Sproule Avenue and North 12th St, Sacramento County, California 95811. May 9.
- NCE. 2016a. Phase I Environmental Site Assessment (ESA), Twin Rivers (Dos Rios Transit-Oriented Development and Light Rail Station Initiative), Sproule Avenue and North 12th Street, Sacramento, Sacramento County, California 95811. September 22.
- NCE. 2016b. Report of Findings, Phase II Environmental Site Assessment (ESA), Twin Rivers (Dos Rios Transit-Oriented Development and Light Rail Station Initiative), Sproule Avenue and North 12th Street, Sacramento, Sacramento County, California 95811. September 22.
- Tetra Tech, 2019: Draft Analysis of Brownfield Cleanup Alternatives (ABCA), Light Rail Property of the Twin Rivers Triangle Site, Sproule Ave and North 12th Street, Sacramento, California 95811. October
- Tetra Tech, 2020: SITE ASSESSMENT WORK PLAN, TWIN RIVERS TRIANGLE SITE, Sproule Avenue and North 12th Street, Sacramento, California. June
- Tetra Tech, 2022a: REVISED FINAL SITE ASSESSMENT REPORT, TWIN RIVERS TRIANGLE SITE, Sproule Avenue and North 12th Street, Sacramento, California. March
- Tetra Tech, 2022b: Response Plan for the Light Rail Station, Twin River Triangle Site, Sproule Avenue and North 12th Street, Sacramento, California. September
- Tetra Tech, 2023a: FINAL SOIL GAS INVESTIGATION 2022, TWIN RIVERS TRIANGLE SITE, Sproule Avenue and North 12th Street, Sacramento, California. March
- Tetra Tech, 2023b: Revised Final Site Management Plan, TWIN RIVERS TRIANGLE SITE, Sproule Avenue and North 12th Street, Sacramento, California. July
- Tetra Tech 2023b: Final Explanation of Significant Differences, for the Light Rail Station Response Action, Twin Rivers Triangle Site, Sacramento, California Dated March 20, 2023. (Final ESD)
- Tetra Tech, 2024: RESPONSE ACTION COMPLETION REPORT FOR THE LIGHT RAIL STATION, TWIN RIVERS TRIANGLE SITE, Sproule Avenue and North 12th Street, Sacramento, California 95811. April
- USEPA Analysis of Brownfields Cleanup Alternatives (ABCA) Guidance
<https://www.epa.gov/sites/default/files/2018-11/documents/sample-abca.pdf>

Figures



<div><div></div><div>Site</div></div> <div><div></div><div>Zone Boundary</div></div>	<div><div><div>INVESTING IN COMMUNITIES</div></div></div>	<div>Project Vicinity Map</div> <div>Abbreviated ABCA</div> <div>Light Rail Station Construction Access Separation Cover Layer</div> <div>Triangle Housing Site</div> <div>Twin Rivers Triangle Development</div>	<div><div><div>N</div></div><div>1 in. = 2,000 ft.</div><div><div>0</div><div>1,000</div><div>2,000</div><div>ft.</div></div></div>	<div>FIGURE</div> <div>1</div>	
SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
ESRI World Topographic Basemap	487.62.55	cvaz	9/3/2024	9/4/2024	Gfasiano



Appendix A

DTSC Separation Layer Guidance



Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control

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Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

December 13, 2023

La Shelle Dozier
Executive Director
Sacramento Housing and Redevelopment Agency
801 12th Street
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REVIEW OF DRAFT RESPONSE PLAN REPORT FOR TWIN RIVERS TRIANGLE
SITE, SPROULE AVENUE AND NORTH 12TH STREET SACRAMENTO,
CALIFORNIA (SITE CODE: 102379)

Dear La Shelle Dozier:

The Department of Toxic Substances Control (DTSC) reviewed the draft Response Plan (RP) for the Twin Rivers Triangle Site (Site) located on Sproule Avenue and North 12th Street in Sacramento, California dated August 2023, prepared by Tetra Tech (TT).

The Site is located at the intersection of Sproule Avenue and North 12th Street in the City of Sacramento, Sacramento County, California. The Site consists of Assessor Parcel Numbers (APNs) 001-0103-008-0000, 001-0103-013-0000 and 001-0103-014-0000 (formerly six parcels 001-0103-001, -002, -003, 006, -008, and 010). The Site is bounded by North 12th Street, Sproule Avenue, and North 16th Street.

SHRA (Proponent) decided to separate approximately 0.72-acres within the northwest portion of the 3.14-acre Twin River Triangle Site to expedite development of the proposed light rail station (Light Rail Property). DTSC approved a separate Response Plan for the Light Rail Property on September 15, 2022. This RP pertains to the remaining approximate 1.63-acres that were not a part of the Light Rail Property (Site Remainder).

Based on a review of the RP, DTSC has identified discrepancies that require clarification or modification to the RP. Comments from DTSC's Human and Ecological Risk Office (HERO), Geological Services Unit (GSU) and Engineering and Special Projects Office (ESPO) are provided in the attached memoranda.

To address these discrepancies, please submit a revised RP that includes a response to comments and tracked edits to DTSC. It is DTSC's understanding the Proponent is seeking DTSC grant funding to perform additional work at the Site Remainder. Given the anticipated grant decision timeframe, please provide a response within 100 days of this letter. DTSC recommends SHRA review the Equitable Community Revitalization Grant (ECRG) Guidelines (<https://dtsc.ca.gov/ecrg-new-applicant-resources/>).

In addition to the comments in the attached memoranda, please address the following:

1. General – Recommendation Reference HERO Comment 2 and GSU Recommendation 1): DTSC has concerns with the RP without additional characterization of the Site Remainder. It is likely this approach will result in iterative mobilizations for excavation and confirmation sampling resulting in similar delays as those observed on the contiguous Light Rail Property. DTSC recommends additional characterization be conducted on the Site Remainder before implementation of cleanup activities, either prior to revising the RP or committing in the revised RP to conduct after approval of the RP.
2. General – Soil Gas (Reference HERO Comment 3, GSU Comment 1 and ESPO Comment 1)): The Final Soil Gas Investigation for the Site dated May 2023 (Soil Gas Investigation) proposed additional delineation of soil gas and notification of the adjoining metal sheeting facility of the potential vapor intrusion concern. The RP does not address these items and should be revised to include these details or commit to providing them in a separate deliverable.

Various portions of the RP indicate the need for engineering controls to mitigate accumulation of vapors in occupied spaces. However, the RP does not provide specific details regarding these controls. The 2023 Soil Gas Investigation committed to this stating: "The response plan will include additional mitigation and land use controls". DTSC requests the RP be revised to include these details or commit to providing these details in a separate deliverable.

3. Executive Summary (Reference HERO Comment 1)): The last paragraph of page ES-3 references screening levels for commercial use. Based on the rest of the RP, this appears to be an administrative error and should be revised.
4. Executive Summary: The Site Remainder is referred to as "the Site" and "the Property" interchangeably throughout the RP. DTSC requests nomenclature be specific and consistent throughout the RP.
5. Section 1.0: The RP states SHRA purchased the Site with intent to redevelop the Site Remainder with residential units and some ground floor commercial space.

Other portions of the RP simply reference residential use. Section 3.5.3.3 states the future use of the property is not known and thus assumed to be the most conservative – residential. The RP should be revised to present the current plans of the Site Remainder for consistency.

6. Section 1.2: In accordance with the California Land Reuse and Revitalization Act, the RP should include citation of Health and Safety Code Section 25395.96.
7. Section 2.1: The RP states the APN for the Site Remainder is 001-0103-013. However, according to the Sacramento County Assessor Parcel Viewer, the Site Remainder also includes a portion of APN 001-0103-014. Furthermore, the total acreage of 3.14 does not appear to match the described sizes of the operable units (0.72 acres for the Light Rail Property and 1.63 acres for Site Remainder). The RP should be updated to accurately describe the Site. Additionally, it would be beneficial to include a Figure depicting the current parcel lines and APNs.
8. Sections 3.4.1 and 3.5.5 (Reference GSU Comment 4): The RP references polychlorinated biphenyls (PCBs) as a chemical of concern (COC) in various portions but not throughout the RP including key items such as Table 5. The RP should be revised to include PCBs as a COC throughout the RP.
9. Section 5.2 (Reference GSU Comment 2): The RP provides four cleanup alternatives. However, only three alternatives are referenced at the beginning of Section 5.2. Furthermore, some alternatives only reference metals while others reference metals and dieldrin. Please refer to the comment above related to PCBs. The RP should be revised for consistency.
10. Section 5.2.2: The RP states: “The remaining soils onsite resulting from the response action at the light rail boundary...” It is DTSC’s understanding that all soil stockpiles from the Light Rail Property have been removed. Please confirm and revise the RP as needed.
11. Section 6.2.6 and Figure 9: As indicated in Figure 9, the extent of dieldrin contamination has not been adequately defined. DTSC approved a Final Abbreviated Site Assessment Work Plan OCP Step Out (OCP Work Plan), dated November 2022. A stand-alone completion report was not generated as the sampling was proposed to be performed as part of the response action for the Site Remainder instead. The RP states: “A sampling and analysis plan will be prepared based on the final Response Plan and selected remedy.” DTSC recommends a formal sample and analysis plan for confirmation sampling be included as an appendix to the revised RP. The analytes should include toxaphene, which had elevated reporting limits during the previous sampling

event. Reference Comment 2 of the HERO Memorandum dated January 23, 2023 enclosed within the DTSC approval letter of the OCP Work Plan dated February 2, 2023.

12. Section 6.2.7 (Reference ESPO Comment 2): The RP states the excavated area will not be backfilled because of future development. Section 2.3 of the RP states redevelopment is planned within the next two years. DTSC does not find the potential of an open excavation for up to a two-year period acceptable. The RP should be revised to include mitigation measures to be taken to address the open excavation should redevelopment not occur in the immediate future. Alternatively, if the Site Remainder will be used as a laydown area for development of the Light Rail Property, the RP should be revised to include the placement of cover on the Site Remainder as indicated in the Final Explanation of Significant Differences for the Light Rail Property dated March 2023.
13. Section 8.2: The second paragraph refers to the document as a "RAW". This appears to be an administrative error and should be revised.
14. Section 9.5: The RP anticipates the removal of 2,000 tons of soil from the Site Remainder. However, Section 6.2.4 estimates 3,900 bank cubic yards. Please confirm the estimates.
15. Section 10.0: The first sentence of the last paragraph contains a fragment. DSTC requests the RP be revised to specify what will not be required.
16. Figure 10 (Reference GSU Comment 2): The Figure appears to be representative of alternative 4 and should be revised accordingly.
17. General: Please include a Community Considerations in Cleanup (C3) section in the executive summary of the revised RP that explains, in plain language, the aspects of the cleanup that the community may be most concerned with, and provides confidence that the cleanup will be protective of the neighbors and the future occupants. Although this information is generally already incorporated into the draft RP, DTSC requests a separate C3 summary section be included for ease of review by the community members and general public. The C3 summary section should include, in plain language, the answers to the following questions that may be of concern to the public and will provide clarification on aspects of the cleanup plan that are likely of interest to the community:

Why is this cleanup needed?

How will the community be kept safe during the cleanup?

What will happen to this Site after the cleanup is complete?

How will the future occupants of the Site be kept safe?

Is my drinking water safe?

An example of a recently approved Response Plan with a C3 section can be found via the link below (starts on page 10 of the PDF).

https://www.envirostor.dtsc.ca.gov/getfile?filename=/public%2Fdeliverable_documents%2F6290669083%2FSunrise%20Village%20Response%20Plan%20-%20Roux%20Final%20091123.pdf

If you have any questions regarding this letter, please contact me at (916) 255-3657 or via email at Abraham.Serrato@dtsc.ca.gov.

Sincerely,



Abraham Serrato
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

Enclosures: *HERO Memorandum* dated November 1, 2023
GSU Memorandum dated November 30, 2023
ESPO Memorandum dated November 1, 2023

cc: (see next page)

cc: (via email)

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Sacramento Housing and Redevelopment Agency
MTaylor@shra.org

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Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control


Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

MEMORANDUM

TO: Abraham Serrato
Sr. Environmental Scientist
Site Mitigation and Restoration Program

FROM: Mai Ngo, Ph.D. 
Staff Toxicologist
Human and Ecological Risk Office (HERO)

DATE: November 1, 2023

SUBJECT: CONFIRMATION SAMPLE RESULTS - TWIN RIVERS TRIANGLE SITE,
SACRAMENTO, CALIFORNIA

Project ID: 102379-11

Activity ID: 12018

MPC: 389

DOCUMENTS REVIEWED

DTSC's Human and Ecological Risk Office (HERO) reviewed the *Draft Response Plan For Twin Rivers Triangle Site* (Response Plan), dated August 2023, for the Twin Rivers Triangle (Site) located at North 12th Street and North 16th Street, in Sacramento, California. The Report was submitted by Tetra Tech (Rancho Cordova) on behalf of the Sacramento Housing and Redevelopment Agency (SHRA).

SCOPE OF REVIEW

HERO reviewed the Response Plan for scientific content relevant to human risk assessment. Any future changes to the document should be clearly identified. To facilitate subsequent reviews, any changes or additions to the document should be

clearly identified. Guidance documents referenced in this memo may be found on the [DTSC HERO website](https://dtsc.ca.gov/human-health-risk-hero/) (<https://dtsc.ca.gov/human-health-risk-hero/>), unless otherwise indicated.

BACKGROUND

The entire Site is composed of two parcels (APNs 001-0103-011-0000 and 001-0103-012-0000) and encompasses approximately 3.14-acres on the south shore of the American River, one mile northeast of downtown Sacramento. Historically, this Site was either undeveloped or used for agriculture from the 1800s to the 1930s. Commercial and industrial developments were constructed in the 1930s. By 2005, all structures on these parcels were demolished, although the general area remains highly industrial in development. Adjacent parcels are zoned for mixed-use and host various commercial and industrial services. The proposed development plans are for residential use and may include buildings with commercial use on the first floor and residential use above. A new light rail station and right-of-way is also proposed for the portion of the Site along North 12th Street. This Response Plan addresses the Residential portion (Property) of the Site.

Previously, maximum Site soil arsenic, lead, and thallium concentrations were reported to exceed their respective DTSC residential soil screening levels (SLs) of 0.11 mg/kg and 80 mg/kg, and U.S. EPA regional SL of 0.78 mg/kg for resident soil, respectively. Concentrations of arsenic and thallium also exceed their reported Site-specific background concentrations of nine mg/kg for arsenic and 0.17 mg/kg for thallium. Previous sampling for delineation of soil organochlorine pesticide (OCP), specifically dieldrin, at 100 µg/kg, compared to SL of 34 µg/kg, is reported separately.

Tetrachloroethene (PCE) in soil gas was also detected at 270 µg/m³ at 10 feet below ground surface (ft bgs) compared to the residential SL for soil gas to indoor air of 15 micrograms per cubic meter (µg/m³; 0.03 attenuation factor applied to DTSC SL for Residential Air, cancer endpoint of 0.46 µg/m³). Trichloroethene (TCE) was reported to be 87 µg/m³ at five ft bgs compared to the residential SL for soil gas to indoor air of 16 µg/m³ (0.03 attenuation factor applied to DTSC SL for Residential Air, cancer endpoint of 0.48 µg/m³). Volatile organic compounds (VOCs) were not detected above reporting limits in groundwater samples. Depth to groundwater is approximately 20 ft.

GENERAL COMMENTS

1. **Land Use Standards** – For future screening level risk assessments, HERO recommends the residential scenario be included to inform the need for land use restrictions. Additionally, while the development plans include residential use, the Response Plan stated that Response Action Goals (RAGs; pdf p. 14 of 326) were developed compared to risk screening levels for commercial use. This may be a typographical error and the text should be revised as needed for consistency.
2. **Soil** – HERO strongly recommends additional Site characterization to refine the risk assessment and inform remedial activities. Additional step out sampling to delineate areas of contamination are needed to define the areas with excess risk to human health and inform extent of proposed excavations. For example, successive 5-ft step out soil samples may be collected, with the samples more distal to the hotspots held for analysis pending results of proximal samples. As was seen with the Light Rail portion of the property, inadequate soil characterization may result in multiple excavation events.
3. **Soil Gas** – HERO recommends clarification regarding how VOCs in soil gas would be addressed to ensure the protection of residential and commercial/industrial receptors. The Response Plan stated that land use controls would be implemented to address VOC soil gas impacts. While land use controls are often associated with the maintenance and operation of vapor intrusion mitigation systems (VIMS), VIMS were not mentioned in the Response Plan, and it is unclear if they would be proposed as part of the future development for this Property.
4. **Groundwater** – HERO concludes that municipal use of groundwater may pose excess risk to future receptors since there is presence of lead (1.5 µg/L) and arsenic (1.5 µg/L) in groundwater that exceed the correspondent screening levels for tapwater of 0.28 µg/L (lead acetate) and 0.0082 µg/L (arsenic). While the Response Plan stated that groundwater use as a domestic water supply is not anticipated and that current regulatory limits for drinking water (i.e., MCLs) are met, future groundwater use patterns and regulatory limits may change over time.
5. **Clean Import Fill** – If backfilling with imported soils is needed following proposed excavations, HERO recommends the fill materials meet DTSC's Clean Imported Fill Material Advisory, which includes selection of source area, sampling requirements, and documentation.

SUMMARY

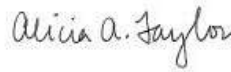
HERO has reviewed the *Draft Response Plan For Twin Rivers Triangle Site* (Response Plan), dated August 2023, and recommends the above comments be addressed in the revised Response Plan resubmitted for DTSC review.

Peer-review:

Alicia Taylor, Ph.D.

Staff Toxicologist

Human and Ecological Risk Office



Concurrence:

Claudio Sorrentino, Ph.D.

Senior Toxicologist

Human and Ecological Risk Office





Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

MEMORANDUM

TO: Abraham Serrato
Environmental Scientist
Santa Susana Field Laboratory Branch (Sacramento)
Site Mitigation and Restoration Program

FROM: Dawn L. Bascomb, PG #9830
Engineering Geologist
Sacramento Geological Services Unit
Site Mitigation and Restoration Program

REVIEWER: Jose Marcos, PG #8176
Senior Engineering Geologist
Geological Services Unit – Cypress Office
Site Mitigation and Restoration Program

DATE: November 30, 2023

SUBJECT: Draft Response Plan
Twin Rivers Triangle Site
(Dos Rios Transit-Oriented Development and Light Rail Station Initiative)
Sproule Avenue and North 12th Street
Sacramento, Sacramento County, California
Project No. 12018/102379-11/RP 389/20099898



DOCUMENT REVIEWED

Draft Response Plan for Twin Rivers Triangle Site, Sproule Avenue and North 12th Street, Sacramento, California by Tetra Tech Dated August 2023. (RP)

The Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) reviewed the above-referenced document and prepared the following technical comments and recommendations. If you have any questions regarding this memorandum, please contact me at dawn.bascomb@dtsc.ca.gov

BACKGROUND

The 3.14-acre Twin Rivers Triangle Site, which originally consisted of six parcels formerly used for commercial enterprises, including manufacturing operations, automotive repair and salvage, is the subject of a California Land Reuse and Revitalization Act Agreement (CLRRA) dated November 12, 2019. The Project Proponent, Sacramento Housing and Redevelopment Agency (SHRA) seeks to redevelop the Site. The Site has been divided into two portions.

The Light Rail Station Portion of the Site is a corridor approximately 50-feet in width, that runs along the Site boundary adjacent to North 12th Street. The RP was submitted to evaluate remedial alternatives on the remaining portion of the property.

COMMENTS

1. Soil Gas. The extent of soil gas plumes to the north, northeast and south of the Site remain only partially delineated. Either the RP should be revised to include the installation and sampling of soil gas wells to complete delineation, or the RP should be revised to commit to the submittal of a workplan under separate cover.
2. Alternative #4 Not Supported by Leachability Test Data. The RP should be revised to remove Remedial Alternative #4 – Excavation, On-Site Consolidation and Asphalt Capping. Leachability data indicates that a cap alone would not be protective of groundwater.
3. Extent of Subsurface Debris. The RP should be revised to show the extent of bricks and other debris in the subsurface. This is needed to more accurately estimate the volume of soil and debris requiring removal. Debris including bricks and mortar exceeded DTSC's commercial screening levels on the Light Rail Station Portion of the Site, and this debris field continues onto the remaining portion of the Site. (See Recommendation #2)
4. Polychlorinated Biphenyls (PCBs). The RP should be revised to include PCBs as contaminants of concern (COCs). Also, further soil characterization sampling (see Recommendation #1) should include PCB analysis or PCBs should be included in confirmation sample analyses.

Currently, Section 3.5.5 states that the screening-level human health risk assessment recommends removal of soils with PCBs and Section 4.1 states that the location of a PCB sample result is co-located with lead contaminated soil, however PCBs are not included as COCs.

The inclusion of PCBs as COCs is warranted because total PCBs in soil sample TP-1 were above residential screening levels. Soil Sample TP-1 was collected as part of the Phase II sampling event.

The inclusion of PCBs as COCs is further warranted because the presence of PCB Aroclor 1254 was confirmed above DTSC's industrial screening level on the Light Rail Station Portion of the Site.

RECOMMENDATIONS

1. Further Characterize Soils Prior to Excavation. GSU recommends that the extent of lead and arsenic contamination in Site soils be further characterized prior to the commencement of excavation activities. The estimated volume of soil requiring removal, and the associated costs and schedule is based on a very limited data set. Reliance on the existing data set resulted in substantial schedule delays and increased costs for the clean-up of the Light Rail Station Portion of the Site.
2. Determine the Full Extent of Subsurface Debris. GSU recommends that the full extent of bricks and other debris in the subsurface is determined prior to excavation activities. Debris including bricks and mortar in the western area of the Light Rail Station Portion of the Site exceeded DTSC's commercial screening levels and the extent onto the remaining property is unknown.



Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control

Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

MEMORANDUM

TO: Abraham Serrato
Project Manager
Site Mitigation and Restoration Program – Sacramento Office

FROM: Jesse Negherbon, Ph.D., P.E.
Senior Hazardous Substances Engineer
Engineering and Special Projects Office
Jesse Negherbon
11/30/2023

REVIEWER: Peter Gathungu, P.E., G.E.
Senior Hazardous Substances Engineer
Engineering and Special Projects Office
P.G.

SUBJECT: REVIEW OF DRAFT RESPONSE PLAN, TWIN RIVERS TRIANGLE
SITE, SACRAMENTO, CALIFORNIA (DTSC Site Code: 102379)

DATE: November 1, 2023



DOCUMENT REVIEWED

The result of this review is limited to the following document, or sections thereof:

Draft Response Plan, Twin Rivers Triangle Site, Sproule Avenue and North 12th Street, Sacramento California; dated August 2023 and prepared by Tetra Tech on behalf of Sacramento Housing and Redevelopment Agency (SHRA).

REVIEW SUMMARY

The Engineering and Special Projects Office (ESPO) of the Department of Toxic Substances Control (DTSC) has completed its review of the above-listed draft Response Plan for the Twin Rivers Triangle site. If you have any questions or comments regarding this memorandum, please contact me at (916) 255-6577 or via email at jesse.negherbon@dtsc.ca.gov.

1. **General Comment.** The Response Plan proposes to include a requirement for engineering controls (i.e. – vapor intrusion mitigation) in the land use covenant (LUC) to address potential vapor intrusion hazards for any future development on the Site. We note that this will either require a new Response Plan, at the time the development occurs or a Revised Response Plan. DTSC will need to review and approve the engineering controls used to satisfy the LUC requirements. We recommend that the discussion in this Response Plan is revised to clarify the future regulatory obligations associated with satisfying the proposed vapor intrusion mitigation requirements of the LUC.
2. **Section 6.2.7, Site Restoration.** This section states that the excavated area will not be backfilled in order to facilitate future development of the property. However, it is unclear how much time will pass between the completion of the response action and the start of construction for the future development. We recommend that the Response Plan is revised to state the excavation areas will be backfilled if the remediation work ends at the beginning of the wet season or if the residential/commercial development at the Site will not begin within three months of the approval of the removal action completion report for the subject Response Plan.
3. **Section 8.1, Regulatory Requirements.** It is our understanding that the remediation contractor selected for this work should be certified to conduct the removal of hazardous substances, per Section 7058.7 of the California Business and Professions Code. The regulatory requirements should be updated accordingly.

From: Krueger, Steve <Steve.Krueger@tetrattech.com>

Sent: Thursday, March 7, 2024 5:54 PM

To: Michael Taylor <mtaylor@shra.org>

Subject: Comments on the Cover

Hi Mike

The SMP provide the specific of the cover. RT is responsible for complying with the SMP. SMP Main points below. I have attached Lora's email that clarifies the use of the site and has the approval letter for the SMP which is to be provided to RT. The bottom line is the SMP was prepared and approved by DTSC to prevent dispersal of contaminants and protect the construction workers during use of the Triangle Site as laydown area. The Contractor is responsible for complying with the SMP.

Main points from the SMP relative to the cover are:

- Prior to commencement of construction of the Light Rail Station, the RAC will install a cover over the impacted soils on the remainder of the Site outside the Light Rail Property to prevent dispersal of arsenic- and lead-impacted soils, and to protect human health during use of the parking lot, site access, and laydown areas.
- This SMP applies to the Light Rail Property and the remainder of the Site which is used for construction access and as a laydown area (Figure 5). The specific components include the soils within the Light Rail Property, the cover area providing construction access, soils within the remainder of the Site and the fencing associated with the Site.

The SMP applies to the following construction activities of the Light Rail Station:

- Soil disturbance within the Light Rail Station and the laydown area on the remainder of the Site.
- The adjoining soils located offsite to the north of the Light Rail Property under the existing sidewalk has lead and arsenic concentrations exceeding residential and commercial/industrial risk screening levels. A land use covenant will be established to this property for intrusive offsite activities such as under hardscaped, landscaped or unimproved areas.
- Management of soils once excavated including transport of soils, stockpile of soils, offsite disposal, and reuse of soils.
- Access to the Light Rail Station construction area and maintenance of the cover.
- Use of the remainder of the Site for laydown area.
- Preconstruction activities such as installation of electrical poles by Sacramento Metropolitan Utility District (SMUD).
- Any follow-on construction activities after the Light Rail Station are complete for Site upgrades or maintenance.

The following activities are prohibited as part of the Light Rail Station construction:

- Excavation or disturbance to the cover.
- Excavation of soils within the remainder of the Site.
- Cover - During the construction period or work by the Contractor, the Contractor is responsible for inspecting the cover and repairing any damage including repair of the geotextile, placement and grading of the aggregate base to maintain 3-inch thickness, and compaction of the cover's aggregate base. (The Contractor is RT's)

DTSC's comment on the SMP, stated "In addition to changing the remedial goal for lead, additional components in the ESD included a DTSC approved Site Management Plan for land disturbing activities in order to protect construction workers during forthcoming construction of the light rail station."

Appendix B

SHRA Construction Access Cover Bid Documents



Triangle Housing Site Construction Access Cover

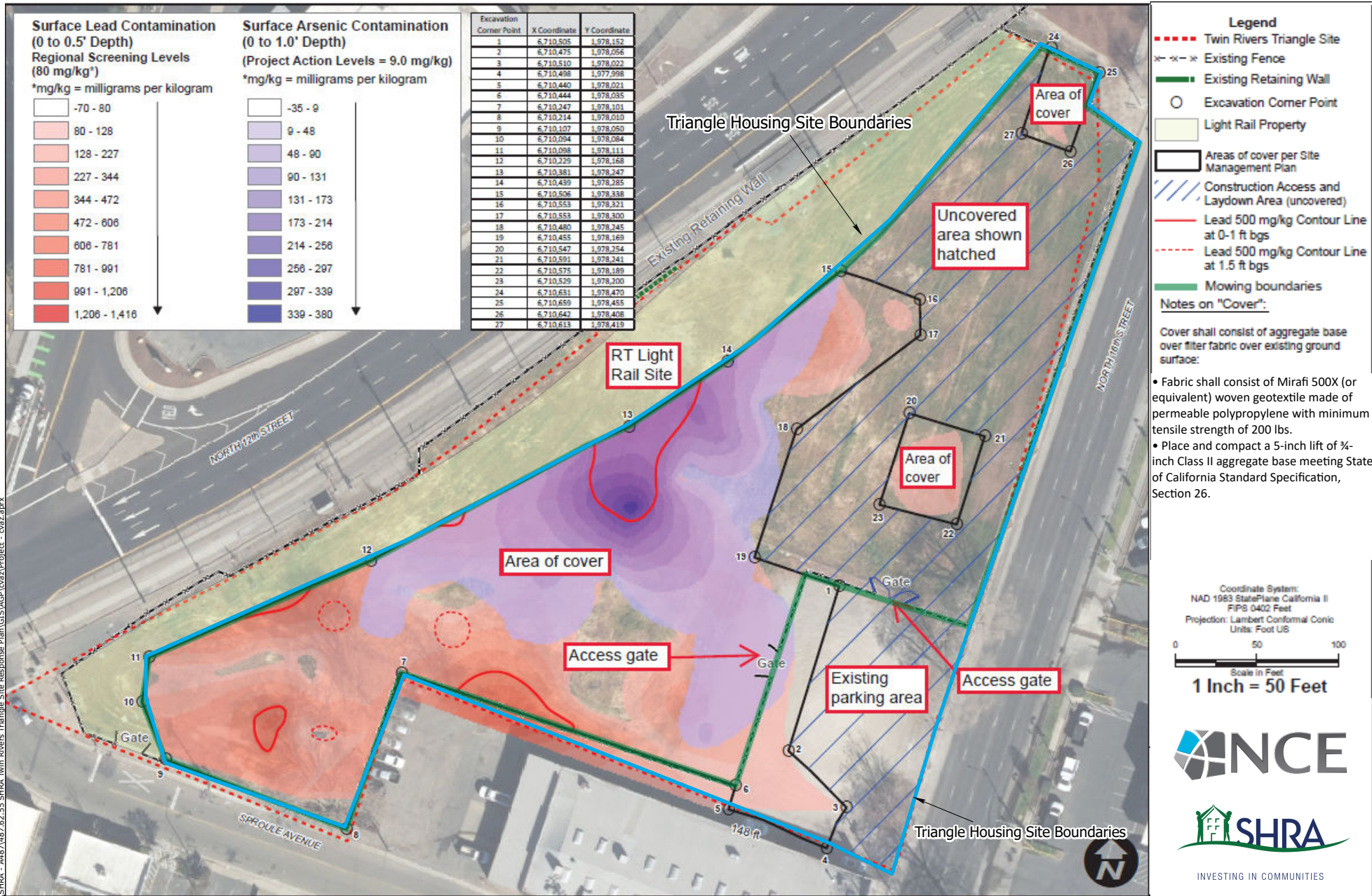
Location: 550 N. 16th St. Sacramento, CA

The Sacramento Housing and Redevelopment Agency (SHRA) owns the land referred to as the “Twin Rivers Triangle”, bounded by 12th Street on the west, 16th Street on the east, and Sproule Ave. on the south. Note that Capitol Sheet Metal is also on the south side of the triangle, but is privately owned, and not part of this project. The westerly portion of the site will receive a new light rail station, which will be constructed by Sacramento Regional Transit (RT). SHRA recently completed soil remediation at the light rail portion of the site. The remainder of the site is the “Triangle Housing Site”, which is the subject of this solicitation.

The purpose of this project is to install a protective ‘cover’ over that portion of the soil on the SHRA Housing Site that contains elevated levels of lead and arsenic. This area is described in detail in the attached **Exhibit A**. The cover will consist of baserock installed over a geo-textile filter fabric, and is intended to act as a protective barrier that will allow staging and transport of construction materials on the Triangle Housing Site as will be required to construct the Dos Rios Light Rail Station on the RT portion of the site.

Scope of Work:

- Mow weeds and remove vegetation contained within the entirety of the SHRA Housing Site portion of the site.
- Compact the existing ground surfaces that will comprise the cover with 2 passes of riding/vibrating roller to 90% compaction.
- Place filter fabric over the compacted areas. Fabric shall consist of Mirafi 500X (or equivalent) woven geotextile made of permeable polypropylene with minimum tensile strength of 200 lbs.
- Place and compact a 5-inch lift of ¾-inch Class II aggregate base meeting State of California Standard Specification, Section 26.
- Total area of cover is expected to be 69,065 SF.
- Note that all personnel performing work on this site shall be Hazwoper certified.
- Provide separate line items for mowing and cover on bid form



Abbreviated ABCA
Light Rail Station Construction Access Separation Cover Layer
Triangle Housing Site
Twin Rivers Triangle Development

FIGURE

2

Distribution and Quality Control

Abbreviated Analysis of Brownfield Cleanup Alternatives

Twin Rivers Triangle Site (Triangle Housing Site Construction Access Cover) for the Construction of the Dos Rios Regional Transit Light Rail Station Sacramento, CA

September 17, 2024

Copy 1: Eduardo - SHRA

Copy 2: Amanda Wallace – Sac City OIED

Copy 3: Project File

NCE Project No. 487.62.55