California Regional Water Quality Control Board
Los Angeles Region

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Linda S. Adams
Cal/EPA Secretary

Arnold Schwarzenegger
Governor

April 22, 2010

State Clearinghouse
Governor's Office of Planning and Research
1400 Tenth Street, Room 222
Sacramento, CA 95814

CERTIFIED RETURN RECIEPT
7009 0820 0001 6811 8704

BIOAUGMENTATION OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER, FORMER NASA INDUSTRIAL PLANT, 12214 LAKEWOOD BOULEVARD, DOWNEY, CALIFORNIA (SCP NO. 0302C, SITE ID NO. 2045E00)

Dear Interested Parties:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is the public agency with primary responsibility for the protection of groundwater and surface water quality for all beneficial uses within major portions of Los Angeles and Ventura Counties, including the referenced site.

The former NASA Industrial Plant (NIP), approximately 155-acre, is located at 12214 Lakewood Boulevard, Downey, California. Previous environmental investigations have identified two areas of concern in the subsurface groundwater contaminated with volatile organic compounds (VOCs), including mainly perchloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2,-DCE) at the NIP site.

Under the oversight of this Regional Board, International Risk Assessment-Downey, LLC (IRAD, Discharger) has been conducting the investigation, remediation and monitoring of soil and groundwater contamination at the subject site. IRAD, through its environmental contractor ARCADIS, has been operating a side-wide *in situ* reactive zone (IRZ) system since November 2005 to remediate the VOC-impacted groundwater. The IRZ system promotes enhanced reductive dechlorination (RED) of chlorinated solvents by biostimulation of the native microbial community. This groundwater remediation process is currently carried out through injecting carbohydrate solution quarterly into the VOC-impacted groundwater under Waste Discharge Requirements (WDR), Order No. R4-2002-0030, CI No. 8724, issued by this Regional Board to IRAD.

Although the current IRZ system has significantly reduced TCE concentrations in the center of the plume, performance monitoring data indicate that complete reductive dechlorination is not occurring efficiently in the vicinity of Line 1000 because of the presence of cis-1,2-DCE and vinyl chloride, and lack of significant ethane production. To further enhance late-stage dechlorination in the Line 1000, IRAD proposes to use bioaugmentation with selected bacteria cultures SDC-9™ or KB-1™ in addition to the current IRZ system, and submitted a report of waste discharge and an initial study for the proposed remediation activities.

The proposed remediation activities involve continuing the current application of carbohydrate solution and in specific areas using additional non-pathogenic, naturally derived (i.e., not genetically engineered),

chlorinated ethene degrading consortium, referred to as SiREM's KB-1® or Shaw's SDC-9™ containing a Dehalococcoides ethenogenes culture to create a reducing condition in groundwater to facilitate reductive dechlorination of chlorinated volatile organic compounds.

On January 24, 2002, this Regional Board adopted General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites (Order No. R4-2002-0030) ("General WDR"). This General WDR permits the injection of selected carbon source amendments proposed for use at sites like the former NIP. On March 22, 2004, the Discharger was granted coverage under the General WDR to begin injection of carbon source amendments at the former NIP. The General WDR does not cover the use of KB-1™ or SDC-9™, therefore, these Site-Specific waste discharge requirements (Site-Specific WDR) have been developed for the proposed remediation activities at the subject site. This Site-Specific WDR will also cover the use of carbon source amendments, therefore, the coverage under the General WDR will be rescinded once this Site-Specific WDR is adopted.

In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study for the proposed groundwater remedial activities. The Regional Board has determined that the proposed remediation and the use of electron donors with KB-1™ or SDC-9™ will not have a significant adverse effect on the environment, and therefore, has prepared a Mitigated Negative Declaration. The Regional Board has also prepared Tentative Waste Discharge Requirements to regulate the use of electron donors with chlorinated–ethene degrading consortium, referred to as SiREM's KB-1® or Shaw's SDC-9™ and to monitor groundwater quality and groundwater flow conditions during remediation.

The enclosed 15 copies of the Notice of Preparation, Initial Study, Mitigated Negative Declaration, and Tentative Waste Discharge Requirements describe the location and nature of the project. The Regional Board hereby submits the Initial Study, Mitigated Negative Declaration, Certificate of Fee Exemption, and Tentative Waste Discharge Requirements to the State Clearinghouse for review and distribution. This Regional Board will accept comments from any interested party until **June 3, 2010**.

If you have any questions, please call me at (213) 576-6736.

G. Jeffrey Hu, P.E.
Chief of Site Cleanup Unit II

Enclosures

1. Notice of Preparation
2. Initial Study
3. Fish & Game Commission Certificate of Fee Exemption
4. Tentative Resolution Approving the Environmental Checklist and an Adopting Mitigated Negative Declaration
5. Cover Letter Transmitting Tentative Waste Discharge Requirements
6. Tentative Waste Discharge Requirements

7. Tentative Monitoring and Reporting Program

cc: United States Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
John Youngerman, State Water Resources Control Board, Division of Water Quality
Department of Fish and Game, Region 5
Department of Toxic Substance Control, Cypress
National Resources Defense Council
Kurt Souza, State Department of Health Services, Drinking Water Field Operations Branch
Brian Hooper, Los Angeles County Department of Public Works, Waste Management Division
Carl G. Brooks, South Coast Air Quality Management District
Ted Johnson, Water Replenishment District of Southern California
Mark Stuart – Central Basin, California Department of Water Resources
Gerald Greene, City of Downey
Philip Nicolay, ARCADIS

Notice of Completion & Environmental Document Transmittal

Appendix C

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: BIOAUGMENTATION OF VOLATILE ORGANIC COMPOUNDS (VOC) IN GROUNDWATER AT FORMER NASA INDUSTRIAL PLANT

Lead Agency: California Regional Water Quality Control Board, Los Angeles Region | Contact Person: G. Jeffrey Hu

Mailing Address: 320 West 4th Street Suite 200 | Phone: 213-576-6736

City: Los Angeles | Zip: 90013 | County: Los Angeles

Project Location:

County: Los Angeles | City/Nearest Community: Downey

Cross Streets: Lakewood Boulevard and Alameda | Zip Code: 90242

Assessor's Parcel No.: 6256-004-036 | Section: _____ | Twp.: _____ | Range: _____ | Base: _____

Within 2 Miles: State Hwy #: 105 | Waterways: NA

Airports: NA | Railways: NA | Schools: Warren High School

Document Type:

CEQA: ☐ NOP ☐ Early Cons ☐ Neg Dec ☒ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.)_____ ☐ Other _____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other_____

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan ☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan ☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.) ☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other_____

Development Type:

☐ Residential: Units_____ Acres_____
☐ Office: Sq.ft._____ Acres_____ Employees_____
☐ Commercial: Sq.ft._____ Acres_____ Employees_____
☐ Industrial: Sq.ft._____ Acres_____ Employees_____
☐ Educational _____
☐ Recreational _____
Total Acres (approx.) 155

☐ Water Facilities: Type_____ MGD_____
☐ Transportation: Type_____
☐ Mining: Mineral _____
☐ Power: Type_____ MW_____
☐ Waste Treatment: Type_____ MGD_____
☐ Hazardous Waste: Type_____
☒ Other: Proposed bioremediation for VOC contaminated groundwater

Project Issues Discussed in Document:

☐ Aesthetic/Visual
☐ Agricultural Land
☐ Air Quality
☐ Archeological/Historical
☐ Biological Resources
☐ Coastal Zone
☐ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☐ Flood Plain/Flooding
☐ Forest Land/Fire Hazard
☐ Geologic/Seismic
☐ Minerals
☐ Noise
☐ Population/Housing Balance
☐ Public Services/Facilities
☐ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☐ Soil Erosion/Compaction/Grading
☐ Solid Waste
☐ Toxic/Hazardous
☐ Traffic/Circulation
☐ Vegetation
☐ Water Quality
☒ Water Supply/Groundwater
☐ Wetland/Riparian
☐ Wildlife
☐ Growth Inducing
☐ Land Use
☐ Cumulative Effects
☐ Other _____

Present Land Use/Zoning/General Plan Designation:

Project Description: *(please use a separate page if necessary)*

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2004

Reviewing Agencies Checklist

Appendix C, continued

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

_____ Air Resources Board
_____ Boating & Waterways, Department of
_____ California Highway Patrol
_____ Caltrans District # _____
_____ Caltrans Division of Aeronautics
_____ Caltrans Planning (Headquarters)
_____ Coachella Valley Mountains Conservancy
_____ Coastal Commission
_____ Colorado River Board
_____ Conservation, Department of
_____ Corrections, Department of
_____ Delta Protection Commission
_____ Education, Department of
_____ Energy Commission
_____ Fish & Game Region # _____
_____ Food & Agriculture, Department of
_____ Forestry & Fire Protection
_____ General Services, Department of
_____ Health Services, Department of
_____ Housing & Community Development
_____ Integrated Waste Management Board
_____ Native American Heritage Commission
_____ Office of Emergency Services
_____ Office of Historic Preservation
_____ Office of Public School Construction
_____ Parks & Recreation
_____ Pesticide Regulation, Department of
_____ Public Utilities Commission
_____ Reclamation Board
_____ Regional WQCB # _____
_____ Resources Agency
_____ S.F. Bay Conservation & Development Commission
_____ San Gabriel & Lower L.A. Rivers and Mtns Conservancy
_____ San Joaquin River Conservancy
_____ Santa Monica Mountains Conservancy
_____ State Lands Commission
_____ SWRCB: Clean Water Grants
_____ SWRCB: Water Quality
_____ SWRCB: Water Rights
_____ Tahoe Regional Planning Agency
_____ Toxic Substances Control, Department of
_____ Water Resources, Department of

_____ Other _____
_____ Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date _____ Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____

Applicant: _____
Address: _____
City/State/Zip: _____
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** 4/19/2010

California Regional Water Quality Control Board
Los Angeles Region

Linda S. Adams
Cal/EPA Secretary

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Arnold Schwarzenegger
Governor

NOTICE OF PREPARATION OF MITIGATED NEGATIVE DECLARATION
CALIFORNIA ENVIRONMENTAL QUALITY ACT

TO ALL INTERESTED AGENCIES, GROUPS AND PERSONS:

This will serve as notice that the Los Angeles Regional Water Quality Control Board (Regional Board) has prepared a Mitigated Negative Declaration on the following project in accordance with the provisions of the California Environmental Quality Act (CEQA).

Project Title: Remediation of Volatile Organic Compounds in Groundwater by Enhanced In-Situ Bioremediation with Bioaugmentation

Project Location (within Los Angeles County): 12214 Lakewood Boulevard, Downey, CA

Project Description: Under the oversight of the Regional Board, International Risk Assumption–Downey (IRAD), the Discharger, proposes to implement semi-continuous injections of an electron donor amendment and bioaugmentation culture, which involves the addition of selected non-pathogenic (naturally derived, *not* genetically engineered) chlorinated ethene-degrading Dehalococcoides ethenogenes culture (referred to as Shaw's SDC-9™ culture, or SiREM's KB-1™) in select areas to facilitate reductive dechlorination of chlorinated volatile organic compounds (VOCs), to remediate VOC-impacted groundwater at the former NASA Industrial Plant (NIP) site. The proposed bioaugmentation pilot study is to be conducted by periodic pulsed addition of carbohydrate solution and bioaugmentation cultures into wells that comprise Line 1000, in the southern portion of the site. The periodic/pulsed injection of carbohydrate solution is expected to minimize the potential for biofouling.

The Discharger may elect to continue and/or expand the bioaugmentation study across the entire former NIP using the existing injection well network. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum for the Regional Board approval. If conducted, it is anticipated that carbohydrate solution will be used as approved for use under the General WDR (Order No. R4-2002-0030, Series 047) in conjunction with one of the following bioaugmentation cultures: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. This Site-Specific WDR will cover the use of carbohydrate solution under the existing General WDR (Order R4-2002-0030, Series 047); therefore, once this permit is adopted, the coverage under the General WDR for the site will be rescinded.

In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study and Mitigated Negative Declaration. The Initial Study documents the reasons to support the finding of the Mitigated Negative Declaration that the project will not have a significant adverse effect on the environment. The Initial Study and the Mitigated Negative Declaration are on file at the address above and are available for public examination at the Regional Board, Monday through Friday (except the State mandated furlough days) between the hours of 8:00 a.m. to 4:50 p.m.

All interested agencies, groups and persons wishing to respond to the finding of Mitigated Negative Declaration are invited to submit written comments for consideration by this Regional Board on or before **June 3, 2010**.

G. Jeffrey Hu, P.E.
Chief, Site Cleanup Unit II

FISH AND GAME COMMISSION
CALIFORNIA DEPARTMENT OF FISH AND GAME
CERTIFICATE OF FEE EXEMPTION

De Minimis Impact Finding

Project Title: *Remediation of Volatile Organic Compounds in Groundwater by Enhanced In-Situ Bioremediation with Bioaugmentation, Former NASA Industrial Plant, Downey, California*

Project Location (within Los Angeles County): 12214 Lakewood Boulevard, Downey, California

Project Description: International Risk Assumption–Downey (IRAD), the Discharger, proposes to implement semi-continuous injections of an electron donor amendment and bioaugmentation culture, which involves the addition of selected non-pathogenic (naturally derived, not genetically engineered) chlorinated ethene-degrading Dehalococcoides ethenogenes culture (referred to as Shaw's SDC-9™ culture, or SiREM's KB-1™) in select areas to facilitate reductive dechlorination of chlorinated volatile organic compounds (VOCs), to remediate the former NASA Industrial Plant (NIP). The proposed pilot test study is to be conducted by periodic pulsed addition of carbohydrate solution and bioaugmentation cultures into wells that comprise Line 1000, in the southern portion of the site. The bioaugmentation cultures being evaluated during the pilot test study include: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. The periodic/pulsed injection of carbohydrate solution is expected to minimize the potential for biofouling.

The Discharger may elect to continue and/or expand the bioaugmentation study across the entire former NIP using the existing injection well network. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum for the Regional Board approval. If conducted, it is anticipated that carbohydrate solution currently being used under the General WDR (Order R4-2002-0030, Series 047) will be applied in combination with one of the following bioaugmentation cultures: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. This Site-Specific WDR will cover the use of the General WDR (Order R4-2002-0030, Series 047); therefore, once this permit is adopted, a letter rescinding the General WDR will be issued.

In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study for the remediation of VOCs in shallow groundwater by the addition of electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™, into shallow groundwater to facilitate the bioremediation of VOCs.

Findings of Exemption:

In accordance with Section 753.5(c) of the Fish and Game Code, this Regional Board, acting as Lead Agency, has conducted an Initial Study and, considering the record for the proposed project as a whole, has determined that there is no evidence that the project will involve potential for adverse effects, either individually or cumulatively, on wildlife or wildlife resources. Consequently, a "de minimis" finding is warranted and no fee is required. In addition, on the basis of substantial evidence in the record, this Regional Board (acting as Lead Agency) rebuts the presumption of adverse effect contained in the Fish and Game Code as it relates to the proposed project.

Certification:

I hereby certify that the lead agency has made the above findings of fact and that based upon the initial study and bearing record the project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

Samuel Unger A.E.O. for
Tracy Egoscue
Executive Officer

Date

ENVIRONMENTAL INFORMATION FORM

Initial Study – Part 1

Date Filed: 29 March 2010

General Information

1. Name and address of developer or project sponsor:	Mr. Paul H. Weaverling IRG Assumptions, LLC 7991 Shafter Parkway, Suite 100 Littleton, CO 80127
2. Address of project:	12214 Lakewood Boulevard Downey, CA 90242-2655
3. Name, address, and telephone number of person to be contacted concerning this project:	Mr. Phil Nicolay ARCADIS 1400 North Harbor Boulevard, Suite 700 Fullerton, CA 92835-4127
4. Indicate number of the permit application for the project to which this form pertains:	Waste Discharge Requirements, Order Number R4-2007-0019 Compliance File Number CI-8724
5. List and describe any other related permits and other public approvals required for this project, including those required by city, regional, state and federal agencies:	Bioaugmentation Work Plan, dated July 2008, was submitted to the LARWQCB. Work plan was approved February 22, 2010.
6. Existing zoning district:	Commercial/Industrial
7. Proposed use of site (Project for which this form is filed):	The Site has been developed into a retail center in the northern portion of the Site and a movie studio in the center portion of the Site. The southern portion of the Site is being developed into a hospital and medical office building complex. Groundwater under portions of the Site is impacted with chlorinated volatile organic compounds and is currently being remediated under an approved In-Situ Reactive Zone Interim Measure Source Reduction Remedial Action Plan and approved Addendum. Bioaugmentation using a non-pathogenic, naturally isolated, chlorinated ethene degrading consortium will be conducted under an amended Site-Specific WDR permit.

Project Description

8. Site size: The Former NASA Industrial Plant Site is approximately 155 acres.

9. Square footage: NA, the Site currently has 164 amendment points in 10 transects. Spacing of amendment points within each transect is approximately 30 feet between wells.

10. Number of floors of construction: NA

11. Amount of off-street parking provided: NA

12. Attach plans: See attached report (Addendum to the In-Situ Reactive Zone Interim Measure Source Reduction Remedial Action Plan) for project remediation overview and Bioaugmentation Work Plan for the proposed bioaugmentation details.

13. Proposed scheduling: The estimated duration of the bioaugmentation program is 36 months.

14. Associated projects: In-Situ Reactive Zone Interim Measure Source Reduction Remedial Action

15. Anticipated incremental development: A portion of the Site is still under redevelopment; most of the Site has been redeveloped and is in use.

16. If residential, include the number of units, schedule of unit sizes, range of sale prices or rent, and type of household size expected: NA

17. If commercial, indicate the type, whether neighborhood, city or regionally oriented, square footage of sales area, and loading facilities: The Site is divided into six parcels collectively covering an area of approximately 155 acres with a common address of 12214 Lakewood Boulevard situated in the City of Downey, California. The northern portion of the Site has been developed by Downey Landing, LLC as a retail center. A film studio operated by Industrial Realty Group occupies the center portion of the Site. The City of Downey has retained a 13-acre parcel in the southwestern portion of the Site for a new public park. The southern portion of the Site is being developed by Kaiser Permanente into a new hospital and medical office building complex. The City of Downey has approved all of the redevelopment activities for the Site.

18. If industrial, indicate type, estimated employment per shift, and loading facilities: NA for proposed scope of work. See above for explanation of current site use.

19. If institutional, indicate the major function, estimated employment per shift, estimated occupancy, loading facilities, and community benefits to be derived from the project: NA

20 If the project involves a variance, conditional use or rezoning application, state this and indicate clearly why the application is required: NA

Are the following items applicable to the project or its effects?
(Discuss below all items checked "Yes ")

21. Change in existing features of any bays, tidelands, beaches; lakes or hills, or substantial alteration of ground contours	[ ] Yes	[X] No
22. Change in scenic views or vistas from existing residential areas or public lands or roads.	[ ] Yes	[X] No

23. Change in pattern, scale or character of general area of project. [ ] Yes [X] No

24. Significant amounts of solid waste or litter. [ ] Yes [X] No

25. Change in dust, ash, smoke, fumes or odors in vicinity. [ ] Yes [X] No

26. Change in ocean, bay, lake, stream or groundwater quality or quantity, or alteration of existing drainage patterns. [X] Yes [ ] No

The addition of bioaugmentation cultures to enhance the current remedial program will result in an improvement in groundwater quality by reducing the mass of volatile organic compounds in groundwater beneath the Site. This process uses one or more amendments to create anaerobic and reducing conditions to ensure growth of indigenous microorganisms capable of reductive dechlorination of VOCs to ethene and ultimately carbon dioxide, chloride, and water. The potential amendments will be limited to those specified in the LARWQCB General WDR permit. The species of microorganims capable of reducing VOCs to ethene is referred to as *Dehalococcoides ethenogenes* (DHE). A non-pathogenic, naturally isolated, chlorinated ethene degrading consortium containing DHE may be added to the amendment delivery system to allow for more rapid remediation by facilitating complete degradation of VOCs in groundwater. The bioaugmentation cultures added to ensure complete reduction of VOCs will only grow in the area where amendment solution is added as a food source. The spread of the cultures will be limited to anaerobic areas near and around amendment points during and for a period of time after amendment addition, and will be controlled by areas where the groundwater system is aerobic.

27. Substantial change in existing noise or vibration levels in the vicinity. [ ] Yes [X] No

28. Site on filled land or on slope of 10 percent or more. [ ] Yes [X] No

29. Use or disposal of potentially hazardous materials, such as toxic substances, flammables or explosives. [ ] Yes [X] No

30. Substantial change in demand for municipal services (police, fire, water, sewage, etc.). [ ] Yes [X] No

31. Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc.). [ ] Yes [X] No

32. Relationship to a larger project or series of projects. [ ] Yes [X] No

ENVIRONMENTAL SETTING

33. Describe the project site as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

No permanent change in the Project Site topography, soil stability, plants, and animals, or special cultural, historical, or scenic aspects are anticipated to occur. Most of the Site has undergone redevelopment with the northern portion of the Site redeveloped into a retail center, the central portion of the Site into a movie studio, and the southern portion into a hospital and medical office complex. The hospital is expected to be completed in 2009. No changes are proposed for the infrastructure installed for the current groundwater remedy at the Site. However, additional temporary injection points may be used on an individual one-time basis to ensure improved distribution of bacteria. Points will be abandoned and area restored to be consistent with current state (i.e. repave, re-asphalt, or re-plant with non-native groundcover currently on site).

34. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.)" and scale of development (height, frontage, set-back, rear yard, etc.). Attach photographs of the vicinity. Snapshots or Polaroid photos will be accepted. Surrounding properties contain commercial/industrial facilities.

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature _____ Date 3/29/2010

Print Name Phil Nicolay

For _____

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

Initial Study - Part 2

ENVIRONMENTAL CHECKLIST FORM

Project title:	Remediation of Volatile Organic Compounds in Groundwater by Enhanced In-Situ Bioremediation with Bioaugmentation, Former NASA Industrial Plant, Downey, California
Lead agency name and address:	California Regional Water Quality Control Board Los Angeles Region 320 West 4th Street, Suite 200 Los Angeles, California 90013
Contact person and phone number:	G. Jeffrey Hu (213) 576-6600
Project location:	12214 Lakewood Blvd. Downey, California
Project sponsor's name and address:	Paul Weaverling Industrial Risk Assumption Downey 7991 Shaffer Parkway, Ste 300 Littleton, Colorado 80127 (303) 972 6633
General plan designation:	Bioaugmentation Pilot Study Industrial Risk Assumption Downey Former NASA Industrial Plant Los Angeles, California
Zoning:	Commercial/Industrial
Description of project:	Under the oversight of the Regional Board, Industrial Risk Assumption Downey (IRAD) is investigating and remediating soil and groundwater impacts at the 55-acre Former NASA Industrial Facility. IRAD proposes to implement semi-continuous injections of an electron donor amendment and bioaugmentation culture, which involves the addition of selected non-pathogenic (naturally derived, not genetically engineered) chlorinated ethene-degrading Dehalococcoides ethenogenes culture (referred to as Shaw's SDC-9™ culture, or SiREM's KB-1™) in select areas to facilitate reductive dechlorination of chlorinated volatile organic compounds (VOCs), to remediate the former NASA Industrial Plant (NIP). The proposed pilot test study is to be conducted by periodic pulsed addition of carbohydrate solution and bioaugmentation cultures into wells that comprise Line 1000, in the southern portion of the site. The bioaugmentation cultures being evaluated during the pilot test study include: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. The periodic/pulsed injection of carbohydrate solution is

culture. The periodic/pulsed injection of carbohydrate solution is expected to minimize the potential for biofouling.

The Discharger may elect to continue and/or expand the bioaugmentation study across the entire former NIP using the existing injection well network. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum for the Regional Board approval. If conducted, it is anticipated that carbohydrate solution will be used as approved for use under the General WDR and one of the following bioaugmentation cultures will be used: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. This Site-Specific WDR will cover the use of the carbohydrate solution; therefore, once this permit is adopted, the existing General WDR for the site will be rescinded.

In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study for the remediation of VOCs in shallow groundwater by the addition of electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™, into shallow groundwater to facilitate the bioremediation of VOCs.

Surrounding land uses and setting (briefly describe the project's surroundings):	The NIP has been redeveloped and is currently used for retail, commercial/industrial and hospital operations. The former NIP comprised approximately 55 acres and is bounded by: Stewart &Gray Road to the north; Bellflower Boulevard to the east; Imperial Highway to the south; and Lakewood Boulevard to the west for retail, commercial/industrial, and residential uses.
Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):	City of Downey Department of Building and Safety for electrical permits. County of Los Angeles for Well Installation Permits

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

Aesthetics	Agricultural Resources	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Hazards & Hazardous Materials	Hydrology/Water Quality	Land Use/Planning
Mineral Resources	Noise	Population/Housing
Public Services	Recreation	Transportation/Traffic
Utilities/Service Systems	Mandatory Findings of Significance	

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

[X] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all the potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Samuel Unger A.E.O. for 4-22-10

Signature Date

Los Angeles Regional Water Quality Control Board

Tracy Egoscue, Executive Officer

EVALUATION OF ENVIRONMENTAL IMPACTS

Potential environmental impacts associated with the proposed project are provided below in a checklist format developed pursuant to the California Environmental Quality Act (CEQA) Guidelines. The checklist has been used to assess the significance or insignificance of each potential impact. Brief explanations of each conclusion are provided after the checklists. Mitigation measures, as required, are discussed below each checklist.

Impact classifications used in the checklist are defined as follows:

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

"Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from **"Potentially Significant Impact"** to a **"Less Than Significant Impact."** The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

"Less Than Significant Impact" applies to an effect that would not be significantly adverse.

"No Impact" applies where the effect occurs without impact.

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

The proposed project is located at a commercial facility.

Mitigation Measures

The proposed project would not result in any impacts to aesthetic resources, therefore no mitigation is required.

II. AGRICULTURAL RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				**X**

The proposed project location is not within existing zoning for agricultural purposes.

Mitigation Measures

The proposed project would not result in any impacts to agricultural resources. Therefore, no mitigation is required.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				**X**
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				**X**
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				**X**
d) Expose sensitive receptors to substantial pollutant concentrations?				**X**
e) Create objectionable odors affecting a substantial number of people?				**X**

The proposed project would not result in any impacts to air quality.

Mitigation Measures

The proposed project would not result in any impacts to air quality, therefore no mitigation is required.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

The proposed project would not result in any impact to biological resources.

Mitigation Measures

The proposed project would not result in any impact to biological resources, therefore no mitigation is required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				**X**
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to §15064.5?				**X**
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				**X**
d) Disturb any human remains, including those interred outside of formal cemeteries?				**X**

There are no known historic, archaeological, paleontological or unique geologic resources that exist at the proposed site.

Mitigation Measures

The proposed project would not result in any impacts to cultural resources, therefore no mitigation is required.

VI. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides?				**X**
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				**X**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks of life or property?				**X**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				**X**

The proposed project would not result in any geologic or soil impacts.

Mitigation Measures

The proposed project would not result in any geologic or soil impacts, therefore no mitigation is required.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

The proposed project would not result in any hazards or hazardous materials impacts associated with the public.

Mitigation Measures

The proposed project would not result in any hazards or hazardous materials impacts associated with the public, therefore no mitigation is required.

VIII. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially degrade groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				**X**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				**X**
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or surface runoff in a manner which would result in flooding on- or offsite?				**X**
e) Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				**X**
f) Otherwise substantially degrade water quality?				**X**
g) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				**X**
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				**X**
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				**X**
j) Inundation by seiche, tsunami, or mudflow?				**X**

Bioaugmentation will increase the biomass throughout the aquifer, achieving effective biodegradation of dissolved and sorbed contaminants. The addition of mentioned carbohydrate solution into the aquifer will stimulate the growth of a bacteria ultimately resulting in reductive dechlorination of chlorinated volatile organic compounds (VOCs) and improve groundwater quality within and downgradient of the treatment

area. After monitoring data indicates that the aquifer conditions are suitable (i.e., sulfate-reducing), then bioaugmentation will be performed by adding a bacterial culture (i.e., Shaw's SDC-9™ or SiREM's KB-1™) to the subsurface, which will further degrade the VOCs into harmless byproducts.

Mitigation Measures

The proposed project will be conducted pursuant to:

1. Remedial action plans approved by the Executive Officer:

   "Groundwater Remedial Action Plan", dated November 26, 2008, prepared by Arcadis G&M, Inc. Approved on June 25, 2009.

   "Bioaugmentation Work Plan" dated July 11, 2008, prepared by Arcadis G&M, Inc. Approved on February 22, 2010.

2. Site-Specific Waste Discharge Requirements Order No. R4-2010-XXXX for the addition of electron donor solution and bioaugmentation cultures, and Monitoring and Reporting Program No. CI 8724 to be considered for adoption on June 3, 2010.

A groundwater sampling and analysis program will be conducted prior to, during, and post addition to closely monitor groundwater effects. Groundwater monitoring will be conducted from up to14 existing site groundwater monitoring wells and any additional wells deemed necessary to monitor performance within the respective treatment areas. Analysis will include (1) field parameters (e.g., temperature, conductivity, DO, turbidity, and ORP), (2) VOCs, (3) electron donor parameters (e.g., chemical oxygen demand [COD] or total organic carbon [TOC]), (4) redox sensitive parameters (e.g., ferrous iron, sulfate, nitrate, and methane), (5) bioactivity parameters (e.g., alkalinity and pH), and (6) bacterial DNA analysis by Quantitative Polymerase Chain Reaction test (qPCR) to identify the amount of indigenous *dehalococcoides spp.* strains.

Progressive changes in local groundwater quality will occur over a relatively short period of time, leading to an overall groundwater quality improvement. The bacterial population added to ensure complete reduction of TCE daughter products will only grow in the area where amendments (food source) are added. The spread of the bacterial population will be limited to anaerobic areas near and around the amendment injection points during and from a period of time after amendment addition, and will be controlled by areas where the groundwater system is aerobic.

Control measures would be implemented if carbohydrate solution and Dehalococcoides ethenogenes (DHE) associated with the bioaugmentation culture were detected in monitoring points outside the treatment zone. These measures would involve stopping further addition of amendments to the groundwater. After this control measure has been implemented the remaining amendments in the groundwater will naturally break down, effectively removing food source and allowing the groundwater system to return to more aerobic conditions. The bioaugmentation culture (Shaw's SDC-9™ culture or SiREM's KB-1™ culture) requires an electron donor/carbon source amendment (food), VOCs, and anaerobic conditions to survive. Given these growth requirements, the bioaugmentation culture will not survive due to the loss of the food source and anaerobic conditions.

If the above mentioned control measure does not prevent the offsite migration of the carbohydrate solution and/or the bioaugmentation cultures, a contingency plan, involving the installation of a hydraulic containment system, will be implemented. The slow rate of groundwater flow within and down gradient of the pilot study areas allows for sufficient time to complete design, installation, and implementation of a hydraulic containment system if necessary.

IX. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				**X**
b) Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				**X**
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				**X**

The proposed project would not result in any impacts to land use and planning.

Mitigation Measures

The proposed project would not result in any impacts to land use and planning, therefore no mitigation is required.

X. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**

The project site has no known mineral resources.

Mitigation Measures

The proposed project would not result in any impacts to mineral resources, therefore no mitigation is required.

XI. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Noise levels will be similar to those of the existing operation. This project is not located in an area that has noise levels in excess of standards from air operations.

Mitigation Measures

The proposed project would not result in any significant noise impacts, therefore no mitigation is required.

XII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or directly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Population growth will not be affected and displacement of housing or people will not occur.

Mitigation Measures

The proposed project would not result in any impacts to population or housing, therefore no mitigation is required.

XIII. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

The proposed project would not result in any impacts to public services.

Mitigation Measures

The proposed project would not result in any impacts to public services, therefore no mitigation is required.

XIV. RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

The proposed project will not result in any recreation impacts.

Mitigation Measures

The proposed project will not result in any recreation impacts, therefore no mitigation is required.

XV. TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in the traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				**X**
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				**X**
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				**X**
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				**X**
e) Result in inadequate emergency access?				**X**
f) Result in inadequate parking capacity?				**X**
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				**X**

The proposed facility is not expected to create a significant load to the existing surface street.

Mitigation Measures

The proposed project would not result in any significant transportation or traffic impacts, therefore no mitigation is required.

XVI. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

The proposed project would not result in any impacts related to utilities or service systems.

Mitigation Measures

The proposed project would not result in any impacts related to utilities or service systems, therefore no mitigation is required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)				X
c) Does the project have environmental effects which will cause substantially adverse effects on human beings, either directly or indirectly?				X

As discussed throughout this document and with the implementation of the RWQCB-approved remediation plans, the General Waste Discharge Requirements, and the Site-Specific Waste Discharge Requirements, the proposed project would not result in any significant impacts to the quality of the environment, nor would it substantially affect biological resources and associated habitats or eliminate important examples of California history or prehistory.

The proposed project would not result in significant cumulative impacts.

As indicated in this document, the proposed project is expected to result in positive benefits of improving groundwater quality.