Staff Report to the Planning Commission

Application Number: 05-0269

Applicant: Hulter Construction
Owner: Donna Strohbeen, et al
APN: 029-371-18

Agenda Date: April 26,2006
Agenda Item #: 8
Time: After 9:00 a.m.

Project Description: Proposal to create 13 residential lots and to grade over 10,000 cubic yards. Requires a Subdivision Permit and Preliminary Grading Approval.

Location: The project is located on the west side of Maciel Avenue between Byer Road and Encina Drive, Live *Oak*

Supervisoral District: First District (District Supervisor: Beautz)

Permits Required: Subdivision and Preliminary Grading Approval

Staff Recommendation:

- Certification of the mitigated Negative Declaration in accordance with the California Environmental Quality Act; and
- Approval of Application 05-0269, based on the attached findings and conditions.

Exhibits

A.	Project Plans	F.	Zoning & General Plan Maps
B.	Findings	G.	Will Serve Letters
C.	Conditions	H.	Comments & Correspondence
D.	Mitigated Negative Declaration and Initial Study	I.	Revised Remediation Plan
E.	Assessor's Parcel Map		

Parcel Information

Parcel Size:	2.43 acres
Existing Land Use - Parcel:	Former nursery, recently fire damaged and demolished
Existing Land Use - Surrounding:	residential
Project Access:	Maciel Avenue, Byer Road, Encino Drive, Willa Way
Planning Area:	Live *Oak*
Land Use Designation:	R-UL (Low Density Urban Residential)

Zone District:	R-1-6 (Single-familyresidential - 6,000 square foot minimum lot size)
Coastal Zone:	__ Inside XX Outside

Environmental Information

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	Soils Report Completed
Fire Hazard:	Not a mapped constraint
Slopes:	Gentle to level
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	About 10,000 cubic yards
Tree Removal:	One tree proposed to be removed
Scenic:	Not a mapped resource
Drainage:	Engineered drainage plan
Archeology:	Not mapped/no physical evidence on site

Services Information

Urban/Rural Services Line:	XX Inside __ Outside
Water Supply:	Santa Cruz City Water
Sewage Disposal:	Santa Cruz County Sanitation District
Fire District:	Central Fire
Drainage District:	Zone 5

History

The subject parcel was a remainder lot from a previous 17-lot subdivision approved under Permit 98-0564 on June 9, 1999. This remainder lot contained the Antonelli's Begonia Gardens, a family-owned specialty nursery. The main building of the nursery was destroyed and other structures damaged by fire early in 2005. These structures have recently been demolished. Since this lot was a remainder of a previous land division, an Unconditional Certificate of Compliance was required prior to sale. This Certificate of Compliance was issued and recorded for this lot on 7/26/05.

Research for the original subdivision project (98-0564) found that the surface soil was contaminated with DDT and its breakdown products from past agricultural practices and a remediation/clean up was required. Part of the remediation involved placing contaminated soil under the parking lot on the subject parcel, where it was capped and isolated from the surface. The soil under the parking lot, as well soil on three other areas of the property that have elevated levels of DDT and DDT byproducts and Dieldrin, pesticides now banned by the EPA, will be remediated as part of this project. The remediation will precede the residential development. A substantial portion of the grading is associated with removing the contaminated soils.

The proposed project is subject to environmental review per the requirements of the California Environmental Quality Act (CEQA). The project was reviewed by the County's Environmental Coordinator on December 12,2005. The mandatory public comment period ended on January 25,

2006. Comments were received from the State Water Resources Control Board and are discussed later in the staff report. The Initial Study, Negative Declaration and Mitigations are included in the staff report as Exhibit D.

Zoning & General Plan **Consistency**

The subject property is 2.43 gross acres in size. 11,448.7 square feet are required for widening Maciel Avenue in conformance with the approved Plan Line, and 8,232.3 square feet will be dedicated to widening Encina Drive. This leaves 86,134 square feet (1.98 acres) of net developable area. The site's R-UL (Urban Low Density Residential) General Plan designation allows a density range of 4.4 to 7.2 units per net developable acre (U/NDA), which corresponds to lot size requirements of 6,000 to 10,000 net developable square feet. The objective of this land use designation is to provide for low-density residential development in areas within the Urban Services Line that have a full range of urban services. The proposed subdivision creates 13 units on 1.98 net developable acres, resulting in a density of 6.6 U/NDA consistent with the density set forth for R-UL General Plan designation. The R-1-6 (Single family residential - 6,000 square foot minimum lot size) zone district is an implementing zone district for the R-UL General Plan designation. The subdivision's parcel sizes, which range in size from 6,050 square feet to 7,600 square feet, are consistent with the R-1-6 minimum lot sizes.

The proposed subdivision complies with the zoning ordinance in that the property is intended for residential use, the lot sizes meet the minimum dimensional standard for the R-1-6 zone district, and the setbacks on the new lots created will be consistent with the minimum zoning ordinance requirements. Specifically, the proposed development on the new lots will meet the required setbacks of 20 feet for the front yard, 15 feet from the rear parcel boundary, and 5 and 8 feet for the side parcel boundaries. The proposed comer lots meet the required the 20 foot required front and street side setbacks, the side yard setback of either 5 or 8 feet and the rear yard of 15 feet. The maximum allowed lot coverage and floor area ratio for the R-1-6 zone district is 30% and 50% of the net parcel site area respectively. The average lot coverage for the proposed development is 24.5% and the maximum proposed is 27.7%. The average proposed floor area ratio (FAR) for the development is 38% while the maximum proposed FAR is 43%. The proposed building footprints are shown on the architectural plans included as Exhibit A, as are the lot coverage and floor area ratio calculations. The proposed streets meet the road standards for urban residential development set forth in the County's Design Criteria.

Since thirteen residential parcels are proposed, the project has an Affordable Housing Obligation (AHO) of 2 units in accordance with County Code Section 17.10. The project will meet the AHO through the construction of two affordable units, one on Parcel 2 and the other on Parcel 8. The proposed affordable units are consistent with the requirements set forth in County Code Section 17.10 with respect to the size and design of the affordable unit. Specifically, the affordable unit can be a minimum size of 75% of the average size of the market rate residences. The average gross area of the market rate units is 2,792 square feet and 75% of the average is 2,094 square feet. The gross area for each proposed affordable dwelling is 2,300 and 2,730 square feet respectively, which meets the requirements. In addition, the lots for each affordable unit are not the smallest parcels in the development. Specifically, Parcel 8 is the smaller of the two affordable lots, and there are five market rate parcels which are smaller in size. The architectural designs are the same style and quality as is used throughout the development.

Grading and Environmental Remediation

The project site is somewhat bowl-shaped in topography with a low-lying area where rainwater tends to accumulate. The grading plan proposes to fill this depression and achieve positive drainage. The soils in four locations on the property are contaminated with pesticides and the breakdown products of pesticides, specifically DDT, DDE, DDD and Dieldrin, in amounts that exceed the maximum allowed soil levels of 1 ppm DDT and DDT byproducts and 0.03 ppm Dieldrin. Originally, the removal of about 1,300 cubic yards of soil was proposed to bring the contamination levels to the acceptable soil contamination limits. During the CEQA review period, the State Water Resources Control Board submitted comments reporting that the remaining contamination levels would exceed water quality standards and raised concerns that this may have potential water quality impacts. While the originally proposed remediation met soil safety standards for these site's soil contaminants, the applicant has agreed to remove the Dieldrin, DDT and DDT byproducts contaminated soils, so that all remaining on-site soils will be below detection levels. The revised remediation plan has been reviewed and accepted by the Hazardous Materials section of Environmental Health Services.

The contaminated soils will be trucked to the Class III landfill in Marina for disposal. The remediation work will be supervised by the consulting geologist and Environmental Health Services (EHS) Hazardous Materials staff. EHS staff shall be notified in advance of commencement of the remedial grading, to ensure that EHS staff is on site to monitor the remediation work. Work will not be allowed in windy conditions (> 15 mph or less, if so specified in the plan). In addition, the soils will be continuously wetted by a water truck or fire hose during excavation to ensure contaminated dust particles do not leave the site. Trucks will be covered and haul routes identified and approved in advance. The work to remove the contaminated soil will be part of an Environmental Health Services approved and supervised remediation project. In order to minimize the potential for contaminated runoff, the remedial grading cannot occur during the winter grading season (between October 15 and April 15). At the completion of the phase I work (site remediation), the applicant will be required to submit a letter from the consulting geologist and EHS staff to Planning Department staff. This letter must approve the results and verify that the property has been successfully decontaminated.

Design Review

The project has been reviewed by the Urban Designer and complies with the requirements of the County Design Review Ordinance, in that the proposed project will incorporate site and architectural design features such as to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape. The new homes are proposed to be two-stories with contemporary split-level designs that are consistent in size with the newer development in the area. The architectural styles of the proposed homes utilize four basic designs and reversed plans, and are better articulated than prior adjacent development. A combination of finish materials are proposed using "hardiboard", "hardishingle" and "hardiplank" as follows: two homes are proposed to **use** shingle siding on both stones, all of the other homes will have horizontal siding on the first story with the following combinations of material(s) on the second story: shingles, horizontal siding with

vertical "board and batten" on the gables, vertical "board and batten" with and without shingles on the gables, horizontal siding with shingles at the gables. All of the roofs will be charcoal or gray composition shingles, and a variety of color combinations are proposed using grays, blues, siennas and green. Some of the color patterns repeat but are not used on the same side of the block. The combination of designs, materials and colors will provide a harmonious design for the subdivision, while avoiding a "cookie cutter" appearance.

Conclusion

As proposed and conditioned, **the** project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Certification of the mitigated Negative Declaration in accordance with the Califomia Environmental Quality Act; and
- **APPROVAL** of Application Number **05-0269,** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

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Report Reviewed **By:** C Graves

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Development Review

SUBDMSION FINDINGS:

1. THAT THE PROPOSED SUBDIVISION MEETS ALL REQUIREMENTS OR CONDITIONS OF THE SUBDIVISION ORDINANCE AND THE STATE SUBDIVISION MAP ACT.

The proposed division of land meets all requirements and conditions of the County Subdivision Ordinance and the State Map Act in that the project meets all of the technical requirements of the Subdivision Ordinance and is consistent with the County General Plan and the Zoning Ordinance as set forth in the findings below.

2. THAT THE PROPOSED SUBDIVISION, ITS DESIGN, AND ITS IMPROVEMENTS, ARE CONSISTENT WITH THE GENERAL PLAN, AND THE AREA GENERAL PLAN OR SPECIFIC PLAN, IF ANY.

The proposed division of land, its design, and its improvements, are consistent with the General Plan. The project creates seven new single-family lots and is located in the Residential, Urban Low General Plan designation. This designation allows a density range of 4.4 to 7.2 Units per Net Developable Acre, which corresponds to lot size requirements of 6,000 to 10,000 net square feet. The objective of this land use designation is to provide for lower density residential development in areas within the Urban Services Line that have a full range of urban services. As proposed, the thirteen residential units on 1.98 net developable acres, resulting in a density of 6.6 Units per Net Developable Acre, which is consistent with the density set forth for the R-UL General Plan designation.

The project is consistent with the General Plan in that the full range of urban services is available and will be extended to the new parcels created, including municipal water and sewer service. The land division will be accessed by existing roads – Maciel Avenue, Byer Road, Encina Drive and Willa Way. Maciel Avenue and Encina Drive will be improved through widening and new sidewalks. The proposed improvements will provide satisfactory access to the new parcels created by the project. The proposed subdivision is similar to the pattern and density of surrounding development, is near commercial shopping facilities and recreational opportunities, and, with proposed road improvements, will have adequate and safe vehicular access.

The land division, as conditioned, will be consistent with the General Plan regarding infill development in that the proposed single-family development will be consistent with the pattern of the surrounding development, and the design of the proposed home is consistent with the character of the surrounding neighborhood. The land division is not in a geologic hazard or environmentally sensitive area and protects natural resources by providing residential development in an area designated for this type and density of development.

3. THAT THE PROPOSED SUBDIVISION COMPLIES WITH ZONING ORDINANCE PROVISIONS AS TO USES OF LAND, LOT SIZES AND DIMENSIONS AND ANY OTHER APPLICABLE REGULATIONS.

The proposed division of land complies with the zoning ordinance provisions as to uses of land, lot sizes and dimensions and other applicable regulations in that the use of the property will be

residential in nature, the lot sizes meet the minimum dimensional standards for the R-1-6 zone district where the project is located, and all setbacks will be consistent with the zoning standards. The proposed new dwellings will comply with the development standards in the zoning ordinance as they relate to setbacks, maximum parcel coverage, minimum site width, floor area ratio and minimum site frontage.

The subdivision meets the requirements of County Code Section 17.10 in meeting the required Affordable Housing Obligation (AHO) of *2* units. The project will construct two affordable units (on Parcel *2* and 8). The proposed affordable units are consistent with the overall development and meet the requirements set forth in County Code Section 17.10 with respect to the size and design for affordable units.

4. THAT THE SITE OF THE PROPOSED SUBDIVISION IS PHYSICALLY SUITABLE FOR THE TYPE AND DENSITY OF DEVELOPMENT.

The site of the proposed land division is physically suitable for the type and density of development in that no challenging topography affects the building sites, the existing property is commonly shaped to ensure efficiency in further development of the property, and the proposed parcels offer a traditional arrangement and shape to insure development without the need for variances or site standard exceptions. No environmental constraints exist which would necessitate the area remain undeveloped.

5. THAT THE DESIGN OF THE PROPOSED SUBDIVISION OR TYPE OF IMPROVEMENTS WILL NOT CAUSE SUBSTANTIAL ENVIRONMENTAL DAMAGE NOR SUBSTANTIALLY AND AVOIDABLY INJURE FISH OR WILDLIFE OR THEIR HABITAT.

The design of the proposed division of land and its improvements will not cause environmental damage nor substantially and avoidably injure fish or wildlife or their habitat. No mapped or observed sensitive habitats or threatened species impede development of the site as proposed. The site has soils in four locations that are contaminated with pesticides and the breakdown products of pesticides, specifically DDT, DDE, DDD and Dieldrin, in amounts that exceed the maximum allowed soil levels of 1 ppm DDT and DDT byproducts and 0.03 ppm Dieldrin. During the CEQA review period, the State Water Resources Control Board submitted comments reporting that the remaining contamination levels would exceed water quality standards and raised concerns that this may have potential water quality impacts. The applicant has agreed to remove the Dieldrin, DDT and DDX contaminated soils, so that all remaining on-site soils will be below detection levels. The contaminated soils will be trucked to the Class III landfill in Marina for disposal. This remediation work will be supervised by the consulting geologist and Environmental Health Services (EHS) Hazardous Materials staff. The project received a mitigated Negative Declaration on March 2, 2006, pursuant to the California Environmental Quality Act and the County Environmental Review Guidelines that determined that all environmental impacts have been reduced to a less than significant level.

6. THAT THE PROPOSED SUBDIVISION OR TYPE OF IMPROVEMENTS WILL NOT CAUSE SERIOUS PUBLIC HEALTH PROBLEMS.

The proposed division of land or its improvements will not cause serious public health problems in that municipal water and sewer are available to serve the proposed parcel, and these services will be extended, including a new hydrant to serve the new parcels created. As discussed in Finding #6, the site has pesticide contaminated soils that currently exceeds allowable soil contamination levels, the contaminated soils will be removed under the supervision of the project geologist and the Hazardous Materials staff from County Environmental Health Services and disposed of in an approved landfill. After completion of the site remediation, DDT, DDX and Dieldrin will be below detectable levels. Therefore, the proposed subdivision will not cause serious public health problems as a contaminated site will be cleaned up to levels meeting water quality standards.

7. THAT THE DESIGN OF THE PROPOSED SUBDIVISION OR TYPE OF IMPROVEMENTS WILL NOT CONFLICT WITH EASEMENTS, ACQUIRED BY THE PUBLIC AT LARGE, FOR ACCESS THROUGH, OR USE OF PROPERTY WITHIN THE PROPOSED SUBDIVISION.

The design of the proposed division of land and its improvements will not conflict with public easements for access in that no easements are known to encumber the property. Access to all lots will be from existing public streets – Maciel, Byer and Willa and one private street – Encina Drive.

8. THE DESIGN OF THE PROPOSED SUBDIVISION PROVIDES, TO THE EXTENT FEASIBLE, FOR FUTURE PASSIVE OR NATURAL HEATING OR COOLING OPPORTUNITIES.

The design of the proposed division of land provides to the fullest extent possible, the ability to use passive and natural heating and cooling in that the resulting parcels are oriented in a manner to take advantage of solar opportunities, and solar power facilities are proposed for each new dwelling. All of the proposed parcels are conventionally configured and the proposed building envelopes meet the minimum setbacks as required by the zone district for the property and County code.

9. THE PROPOSED DEVELOPMENT PROJECT IS CONSISTENT WITH THE DESIGN STANDARDS AND GUIDELINES (SECTIONS 13.11.070 THROUGH 13.11.076) AND ANY OTHER APPLICABLE REQUIREMENTS OF THIS CHAPTER.

The proposed development is consistent with the Design Standards and Guidelines of the County Code in that the proposed lot sizes meet the minimum dimensional standards for the R-1-6 zone district, and all development standards for the zone district will be met.

The project has been reviewed by the Urban Designer and complies with the requirements of the County Design Review Ordinance, in that the proposed project will incorporate site and architectural design features such as to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape. The new homes are proposed to be two-stories with contemporary split-level designs that are consistent in size with the newer development in the area. The architectural styles of the proposed homes utilize four basic designs and reversed plans. A combination of finish materials are proposed using "hardiboard", "hardishingle" and "hardiplank" as follows: two homes are proposed to use shingle siding on both stories, all of the other homes will have horizontal siding on the first story with the following combinations of material(s) on the second story: shingles, horizontal siding with vertical "board and batten" on the gables, vertical "board and

batten" with and without shingles on the gables, horizontel siding with shingles at the gables. All of the roofs will be charcoal or gray composition shingles, and a variety of color combinations are proposed using grays, blues, siennas and green. Some of the color patterns repeat but are not used on the same side of the block. The combination of designs, materials and colors will provide a harmonious design for the subdivision, while avoiding a "cookie cutter" appearance.

Development Permit Findings

1. THAT THE PROPOSED LOCATION OF THE PROJECT AND THE CONDITIONS UNDER WHICH IT WOULD BE OPERATED OR MAINTAINED WILL NOT BE DETRIMENTAL TO THE HEALTH, SAFETY, OR WELFARE OF PERSONS RESIDING OR WORKING IN THE NEIGHBORHOOD OR THE GENERAL PUBLIC, AND WILL NOT RESULT IN INEFFICIENT OR WASTEFUL USE OF ENERGY, AND WILL NOT BE MATERIALLY INJURIOUS TO PROPERTIES OR IMPROVEMENTS IN THE VICINITY.

The location of the proposed residential development and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in **the** neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity in that the project is located in an area designated for residential uses and is not encumbered by physical constraints to development. Construction will comply with prevailing building technology, the Uniform Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. A soils engineering report has been completed to ensure the proper design and functioning of the proposed residences. **The** proposed residential development will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure meets all current setbacks that ensure access to light, air, and open space in the neighborhood.

An engineered drainage plan has been prepared for the project. The proposed drainage plan will handle the runoff generated by the increased impervious surfaces and place this runoff into a controlled drainage system

As discussed in Subdivision Findings #5 and ***6,*** the existing site contain soils contaminated with pesticides and pesticide byproducts. The contaminated soils will be removed to a Class III landfill under **the** supervision of the project geologist and the Hazardous Materials staff of the County Environmental Health Services Agency. After remediation is completed, the soil contamination will be below detectable levels, which meets the current water quality standards for these contaminants. Thus, the project will not be injurious and will benefit, the health and welfare of the public's health and welfare.

2. THAT THE PROPOSED LOCATION OF THE PROJECT AND THE CONDITIONS UNDER WHICH IT WOULD BE OPERATED OR MAINTAINED WILL BE CONSISTENT WITH ALL PERTINENT COUNTY ORDINANCES AND THE PURPOSE OF THE **ZONE** DISTRICT IN WHICH THE SITE IS LOCATED.

The project site is located in the R-1-6 (Single- Family Residential - 6,000 square foot minimum) zone district. The proposed location of the residential development and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the R-1-6 zone district in that the primary use of the property will be one single family residence on each lot, that meets all current site standards for the zone district.

3. THAT THE PROPOSED USE IS CONSISTENT WITH ALL ELEMENTS OF THE COUNTY GENERAL PLAN AND WITH **ANY** SPECIFIC PLAN WHICH HAS BEEN ADOPTED FOR THE AREA.

As discussed in Subdivision Finding #2, the project creates seven new single-family lots and is located in the Residential, Urban Low General Plan designation. This designation allows a density range of 4.4 to *7.2* Units per Net Developable Acre, which corresponds to lot size requirements of *6,000* to 10,000 net square feet. The objective of this land use designation is to provide for lower density residential development in areas within the Urban Services Line that have a full range of urban services. The seven residential units proposed on 1.98 net developable acres results in. **a** density of 6.6 Units per Net Developable Acre, consistent with the General Plan density.

The proposed residential development will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and meets all current site and development standards for the zone district as specified in Policy 8.1.3 (Residential Site and Development Standards Ordinance), in that the residential development will not adversely shade adjacent properties, and will meet current setbacks for the zone district that ensure access to light, air, and open space in the neighborhood.

The proposed residential development will not be improperly proportioned to the parcel size or the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that the proposed residential development will comply with the site standards for the R-1-6 zone district (including setbacks, lot coverage, floor area ratio, height, and number of stories) and will result in a structure consistent with a design that could be approved on any similarly sized lot in the vicinity.

A specific plan has not been adopted for this portion of the County.

4. THAT THE PROPOSED USE WILL NOT OVERLOAD UTILITIES AND WILL NOT GENERATE MORE THAN THE ACCEPTABLE LEVEL OF TRAFFIC ON THE STREETS IN THE VICINITY.

The proposed use will not overload utilities or generate more than the acceptable level of traffic on the streets in the vicinity in that it **is** a residential development that will replace a former retail nursery with thirteen dwellings each on a separate lot. The expected level of traffic generated by the proposed project is anticipated to be thirteen (I 3) new peak trips per day (1 peak trip per dwelling unit), such an increase will not adversely impact existing roads and intersections in the surrounding area.

5. THAT THE PROPOSED PROJECT WILL COMPLEMENT AND HARMONIZE WITH

THE EXISTING AND PROPOSED LAND USES IN THE VICINITY AND WILL BE COMPATIBLE WITH THE PHYSICAL DESIGN ASPECTS, LAND USE INTENSITIES, AND DWELLING UNIT DENSITIES OF THE NEIGHBORHOOD.

The proposed residential development will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood in the vicinity, in that the proposed structure is two stories, in a neighborhood of newer two story homes and a few older one-story homes on Encina Drive. The proposed residential development is consistent with the land use intensity and density of the neighborhood.

6. THE PROPOSED DEVELOPMENT PROJECT IS CONSISTENT WITH THE DESIGN STANDARDS AND GUIDELWES (SECTIONS 13.11.070 THROUGH 13.11.076), AND ANY OTHER APPLICABLE REQUIREMENTS OF THIS CHAPTER.

As discussed in Subdivision Finding **#9,** the proposed development is consistent with *the* Design Standards and Guidelines of the County Code. The proposed residential development will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area.

Conditions of Approval

Land Division Permit 05-0269, Tract 1498

Applicant: Hulter Construction

Property Owners: Donna Strohbeen, et. al.

Assessor's Parcel Number: 029-371-18

Property Address and Location: No situs; Located on the west side of Maciel Avenue between Byer Road and Encina Drive, Live *Oak*

Planning Area: Live *Oak*

Exhibits:

A. Tentative Map and Preliminary Improvement Plans, Sheets TM1-TM6, prepared by Ifland Engineers, dated 10/06/05, revised grading plans dated

Architectural and floor plans prepared by Nolan Designs dated 4/18/05, last revised 10/18/05

Landscape Plans prepared by Greg Lewis, Landscape Architect, dated 4/13/05 last revised 10/14/05

Axiometric Drawings by Nolan Designs, Color and Materials Samples

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All correspondence and maps relating to this land division shall carry the permit and tract number noted above.

I. Prior to exercising any rights granted by this Approval, the owner shall:

A. Sign, date and return one copy of the Permit Form to indicate acceptance and agreement with the conditions thereof, and

B. Record the Conditions of Approval on the Final Map. The conditions of approval shall be applicable to all resulting parcels.

C. The property owner(s) shall sign and record the Indemnity Waiver prior to submitting *the* Final Map for recordation.

D. Pay a Negative Declaration De Minimis fee of $25 to the Clerk of the Board of the County of Santa Cruz as required by the California Department of Fish and Game

mitigation fees program.

E. The applicant shall submit a revised, final work plan for review and approval by Environmental Health Services (EHS) hazardous materials staff. The plan shall include detailed dust control and sediment control, provision for keeping the area watered, standards for stopping work and buttoning up the site when wind and gusts exceeds certain speeds, haul routes and requirements for covering loaded trucks, perimeter silt fence to prevent soil leaving the site, perimeter construction fence to prevent unauthorized entry and a designated equipment washing area that isolates ***runoff.*** The plan shall specify that all soil material that contains detectable concentrations of DDT, DDE, or DDD identified through a soil sampling program approved by EHS, or contains detectable concentrations of Dieldrin, shall be removed from the site to a Class 3 landfill. EHS staff shall be on site to witness testing and remediation. Test results are subject to the approval of EHS staff. All remediation work shall be completed and signed off by EHS prior to commencement of any subdivision improvements.

II. **A** Final Map for this land division must be recorded prior to the expiration date of the Tentative Map and prior to sale, lease or financing of any new lots. The Final Map shall be submitted to the County Surveyor (Department of Public Works) for review and approval prior to recordation. No improvements, including, without limitation, grading and vegetation removal, shall be done prior to recording the Final Map unless such improvements are allowable on the parcel as a whole (prior to approval of the land division). The Final Map shall meet the following requirements:

A. The Final Map shall be in general conformance with the approved Tentative Map and shall conform to the conditions contained herein. All other State and County laws relating to improvement of the property, or affecting public health and safety shall remain fully applicable.

B. This land division shall result in no more than thirteen (13) single-family residential lots.

C. The minimum lot size shall be 6,000 square feet, net developable land.

D. The following items shall be shown on the Final Map:

1. Building envelopes and/or building setback lines located according to the approved Tentative Map. The building envelope shall meet the minimum setbacks for the R-1-6 zone district. Garages shall be a minimum of 20 feet from the edge of the right-of-way.

2. Show the net area of each lot to nearest square foot.

3. The owner's certificate shall include:

a. An irrevocable offer of dedication to the County of Santa Cruz for

EXHIBIT C

improvements (Maciel Avenue and Encina Drive) shown on the approved Tentative Map.

E. The following requirements shall be noted on the Final Map as items to be completed prior to obtaining a building permit on lots created by this land division:

1. Lots shall be connected for water service to Santa Cruz City Water Department.

2. Lots shall be connected for sewer service to Santa Cruz County Sanitation District. All regulations and conditions of the Sanitation District shall be met.

3. All future construction on the lots shall conform to the Architectural Floor Plans and Elevations, and the Perspective Drawing as stated or depicted in Exhibits "A" and shall also meet the following additional conditions:

   a. Exterior finishes shall conform to the materials specified in Exhibit "A" and shall be painted in earth tones with accents and details, as shown on the approved plans. T1-11 type wood siding is not permitted.

   b. Notwithstanding the approved preliminary architectural plans, all future development shall comply With the development standards for the R-1-6 zone district. The development of any lot shall not exceed 30 percent lot coverage, or 50 percent floor area ratio, or other standards as may be established for the zone district. All required on-site parking must be provided.

   c. For any structure proposed to be within 2 feet of the maximum height limit for the zone district, the building plans must include a roof plan and a surveyed contour map of the ground surface, superimposed and extended to allow height measurement of all features. Spot elevations shall be provided at points on the structure that have the greatest difference between ground surface and the highest portion of the structure above. This requirement is in addition to the standard requirement of detailed elevations and cross-sections and the topography of the project site, which clearly depict the total height of the proposed structure.

   d. For building sites containing fill placed as part of the land division improvements above the original grade, the total building height shall include the height of the fill above the original grade.

   e. No fencing shall exceed three feet in height within the required front yard or street-side setbacks and shall not exceed six feet in height within the required interior side or rear yard setbacks.

EXHIBIT C

f. All foundations and grading designs shall conform to the recommendations of the accepted soils report by *Tharp* and Associates dated April 2005. Final plans shall reference the project soils report and soils engineer. **A** plan review letter from the project soils engineer is required.

4. **A** final Landscape Plan for the entire site specifying the species, their size, and irrigation plans, meeting the following criteria and conforming to all water conservation requirements of **the** Santa *Cruz* City Water Department water conservation regulations:

a. Turf Limitation. Turf area shall not exceed 25 percent of the total landscaped area. Turf area shall be of low to moderate water-using varieties. such as tall or dwarf fescue.

b. Plant Selection. At least 80 percent of the plant materials selected for non-turf areas (equivalent to 60 percent of the total landscaped area) shall be well-suited to the climate of the region and require minimal water once established (drought tolerant). Native plants are encouraged. Up to 20 percent of the plant materials in non-turf areas (equivalent to 15 percent of the total landscaped area), need not be drought tolerant, provided they are grouped together and *can* be irrigated separately.

c. All street trees shall be a minimum size of 24-inch box trees of a species selected from the County Urban Forestry Master Plan.

d. Soil Conditioning. In new planting areas, soil shall be tilled to a depth of ***6*** inches and amended with six cubic yards of organic material per 1,000 square feet to promote infiltration and water retention. After planting, a minimum of 2 inches of mulch shall be applied to all non-turf areas to retain moisture, reduce evaporation and inhibit weed growth.

e. Irrigation Management. **All** required landscaping shall be provided with an adequate, permanent and nearby source of water which shall be applied by an installed imgation, or where feasible, a drip imgation system. Irrigation systems shall be designed to avoid runoff, overspray, low head drainage, or other similar conditions where water flows onto adjacent property, non-imgated areas, walks, roadways or structures.

1. The imgation plan and an imgation schedule for the established landscape shall be submitted with the building permit applications. The irrigation plan shall show the location, size and type of components of the irrigation system,

EXHIBIT C

the point of connection to the public water supply and designation of hydrozones. The irrigation schedule shall designate the timing and frequency of imgation for each station and list the amount of water, in gallons or hundred cubic feet, recommended on a monthly and annual basis.

ii. Irrigation within the critical root zones established in the Arborist's Report is prohibited. Irrigation outside of the critical root zone, but under the dripline of each existing *oak* shall be limited to very low flow drip-type emitters.

iii. Appropriate irrigation equipment, including the use of a separate landscape water meter, pressure regulators, automated controllers, low volume sprinkler heads, drip or bubbler irrigation systems, rain shutoff devices, and other equipment shall be used to maximize the efficiency of water applied to the landscape.

iv. Plants having similar water requirements shall be grouped together in distinct hydrozones and shall be irrigated separately.

v. Landscape irrigation should be scheduled between 6:00 p.m. and 11:00 a.m. to reduce evaporative water loss.

f. All planting shall conform to the preliminary plan shown as part of Exhibit A, except that all tress planted adjacent to or in the public right of way shall be 24" box in size and shall be selected from the suggested planting list in the Urban Forestry Master Plan. Also:

i. All landscaping shall be permanently maintained by the property owner including any plantings within the County right of way along the frontage of the property.

ii. Any trees planted in the County right of way shall be approved by the Department of Public Works and shall be installed according to provisions of the County Design Criteria.

5. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district in which the project is located. This project will be subject to Mello-Roos fees per the letter from the Live *Oak* School District dated May 10, 2005.

6. Any changes between the approved Tentative **Map,** including but not limited

EXHIBIT C

to the attached exhibits for architectural and landscaping plans, must be submitted for review and approval by the decision-making body. Such proposed changes will be included in a report to the decision making body to consider if they are sufficiently material to warrant consideration at a public hearing noticed in accordance with Section 18.10.223 of the County Code.

III. Prior to recordation of the Final Map, the following requirements shall be met:

A. The applicant shall convene a pre-construction meeting on the site for remediation of contamination that includes the following parties: the applicant, grading contractor supervisor, Santa Cruz County Environmental Health Services (EHS) hazardous materials staff and Santa Cruz County Resource Planning staff. The purpose of the meeting is to verify that all parties are aware of the project conditions, mitigation measures and the timing of testing, inspecting and reporting requirements. Silt fencing and temporary construction fencing to isolate the work area during the clean up phase of the grading will be inspected at the meeting.

B. Submit a letter of certification from the Tax Collector's Office that there are no outstanding tax liabilities affecting the subject parcels.

C. Meet all requirements of the Santa Cruz County Sanitation District as stated in the District's letter dated April 29, 2005, including, without limitation, the following standard conditions:

1. Submit and secure final approval of an engineered sewer improvement plan showing on-site and off-site sewers needed to provide service to each lot proposed. The improvement plan shall conform to the County's "Design Criteria" and shall also show any roads and easements.

2. All existing and proposed easements shall be shown on the Final Map.

3. Show all existing sewer laterals that shall be abandoned.

4. Pay all necessary bonding, deposits, and connections fees, and furnish a copy of the CC&R's to the district, if applicable.

D. All new utilities shall be underground. All facility relocation, upgrades or installations required for utilities service to the project shall be noted on the construction plans. **All** preliminary engineering for such utility improvements is the responsibility of the owner/applicant. Pad-mounted transformers shall not be located in the front setback or in any area visible from public view unless they are completely screened by walls and/or landscaping (underground vaults may be located in the *front* setback). Utility equipment such as gas meters and electrical panels shall not be visible from public streets or building entries.

E. Submit and secure approval of engineered improvement plans from the Department of Public Works and the Planning Department for all roads, curbs and gutters, storm

drains, erosion control, and other improvements required by the Subdivision Ordinance, noted on the attached tentative map and/or specified in these conditions of approval. **A** subdivision agreement backed by financial securities (equal to 150% of engineer's estimate of the cost of improvements), per Sections 14.01.510 and **5**11 of the Subdivision Ordinance, shall be executed to guarantee completion of this work. Improvement plans shall meet the following requirements:

1. All improvements shall be prepared by a registered civil engineer and shall meet the requirements of the County of Santa Cruz Design Criteria except as modified in these conditions of approval. Plans shall also comply with applicable provisions of the Americans With Disabilities Act and/or Title 24 of the State Building Code.

2. The final improvement plans shall specifically note that site work cannot commence unless the Planning Department (project planner and Planning Director) and the Department of Public Works Surveyor have received copies of a site closure letter from Environmental Health Services staff verifying that the remediation has been satisfactorily completed and target levels of clean up reached, and the Project Planner has authorized the commencement of the subdivision improvements.

3. Submit complete grading and drainage plans that include limits of grading, estimated earthwork, cross sections through all pads delineating existing and proposed cut and fill areas, existing and proposed grades, existing and proposed drainage facilities, and details of devices such as back drains, culverts, energy dissipaters and construction details for the detention system, etc. Final drainage and grading plans shall incorporate the comments of David Sims dated September 29, 2005 and shall include the following:

   a. The final grading plans shall specify that winter grading (October 15 through April 15) is prohibited and all **earthwork** shall commence by August **15** or it shall be postponed until the following **April** 15.

   b. The final grading and drainage plans shall note a separate compaction specification on the civil plans for the landscape grading areas in addition to the grading equipment method described.

   c. The final drainage plans shall show and specify the cleanout work for the ditch in the northern drainage area, as noted in the civil engineer's assessment.

   d. The final drainage plans shall note the use of County standard detail for the under-sidewalk drains.

   e. The final drainage plans shall provide a design depth for the driveway swales and note adjoining landscape areas to be graded to allow dispersal and spreading of runoff into these soils areas such that

EXHIBIT C

filtration actually does occur. The distance or direction of runoff for several of the lots shall be revised to provide maximum separation of the driveway from the area inlet. The drainage for Lot 2 must be revised to meet this requirement.

f. Zone 5 drainage fees will apply to the net increase in impervious surface.

4. The final engineered grading plans shall be consistent with the recommendation of the accepted soils report by Tharp and Associates dated April 2005. Final plans shall reference the project soils report and soils engineer. **A** plan review letter from the project soils engineer is required. The final grading plans shall include:

a. Calculations of all volumes of excavated and fill soils.

b. The final grading plans shall be reviewed and approved by the Environmental Planning Section of the Planning Department and the Department of Public Works.

c. Final grading plans shall provide cross sections showing the existing and proposed grades and the maximum fill depths through all building sites.

5. Prior to any ground disturbance, a detailed erosion control plan shall be reviewed and approved by the Department of Public Works and the Planning Department. Earthwork between October 15 and April 15 requires a separate winter grading approval from Environmental Planning that may or may not be granted. The erosion control plans shall identify the location and type of erosion control practices and devices to be used and shall include the following:

a. An effective sediment barrier placed along the perimeter of the disturbance area and maintenance of the barrier.

b. Soil management that prevents loose material from leaving the site.

c. Identify the receiving site(s) for all fill and produce grading permits for the receiving site(s) as appropriate. The receiving site shall be approved by Environmental Planning staff prior to the start of site work. The exported fill material shall be taken either to the municipal landfill or another permitted site.

d. **A** plan to prevent construction vehicles from carrying soil, dirt, gravel, or other material onto public streets. The owner/applicant is responsible for cleaning the street should materials from the site reach the street.

e. Water Quality: Silt and grease traps shall be installed according to the approved improvement plans. Sediment barriers shall be maintained around all drain inlets during construction.

F. Engineered improvement plans for all water line extensions, if required by Santa Cruz City Water Department, shall be submitted for the review and approval of the water agency.

G. All requirements of the Central Fire District shall be met as set forth in the District's letter dated May 10, 2005.

H. Park dedication in-lieu fees shall be paid for eleven (11) dwelling units (with *three* bedrooms each). These fees are $2,400 per unit, but are subject to change.

I. Transportation improvement fees shall be paid for thirteen (13) dwelling units. These fees $2,000 per unit, but are subject to change.

J. Roadside improvement fees shall be paid for thirteen (13) dwelling units. These fees are $2,000 per unit, but are subject to change.

K. Child Care Development fees shall be paid for thirteen **(13)** dwelling units. These fees $327 per unit (which assumes three bedrooms at $109 per bedroom), but are subject to change.

L. Enter into a Certification and Participation Agreement with the County of Santa Cruz to meet the Affordable Housing Requirements specified by Chapter 17.10 of the County Code. This agreement must include the following statements:

1. The developer shall provide two designated affordable units for sale to moderate income households. The current sales price for a **3** bedroom unit (under the above described guidelines for a moderate income family) is $259,918. This sales price assumes a family of four at 80 percent of median income, with $150 per month Homeowners Association dues, and is subject to change.

M. Submit one reproducible copy of the Final Map to the County Surveyor for distribution and assignment of temporary Assessor's Parcel Numbers and situs address.

IV. All subdivision improvements shall be constructed in accordance with the approved improvement plans and in conformance with the requirements of the subdivision agreement recorded pursuant to condition IILD. The construction of subdivision improvements shall also meet the following conditions:

A. Prior to October 1 and prior to the commencement of any subdivision improvements, the applicant shall submit to Planning staff a site closure letter from Environmental

EXHIBIT C

Health Services (EHS) staff verifying that the remediation has been Satisfactorily completed and target levels of clean up reached.

B. Prior to any disturbance, the owner/applicant shall organize a pre-construction meeting on the site. The following parties shall attend the meetings: the applicant, grading contractor, Department of Public Works Inspector and Environmental Planning staff.

1. This pre construction site meeting shall not occur until a site closure letter indicating that clean up is complete has been issued by Environmental Health Services. **A** copy of this letter shall be submitted to the Department of Public Works – Surveyor, the Project Planner and Environmental Planning.

2. During the meeting, the applicant shall identify the site(s) to receive the export fill and present valid grading permit(s) for those sites, if any site will receive greater than 100 cubic yards or where fill will be spread greater than two feet thick or on a slope greater than 20% gradient, where applicable.

C. All work adjacent to *or* within a County road shall be subject to the provisions of Chapter 9.70 of the County Code, including obtaining an encroachment permit where required. Where feasible, all improvements adjacent to or affecting a County road shall be coordinated with any planned County-sponsored construction on that road. Obtain an Encroachment Permit from the Department of Public Works for any work performed in the public right of way. An Encroachment Permit is required for all work within the County rights-of-way. All work shall be consistent with the Department of Public Works Design Criteria.

D. No land clearing, grading or excavating shall take place between October 15 and April 15 and the earthwork for the subdivision improvements shall commence on or prior to August 15'' or shall be delayed until on or after April 15''.

E. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of *an* historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, *or the* Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

F. To minimize noise, dust and nuisance impacts of surrounding properties to insignificant levels during construction, the owner/applicant shall or shall have the project contractor, comply with the following measures during all construction work:

1. Limit all construction to the time between 8:00 am and 5:00 pm weekdays unless a temporary exception to this time restriction is approved in advance by County Planning to address and emergency situation; and

EXHIBIT C

2. The applicant shall designate a disturbance coordinator and a 24-hour contact number shall be conspicuously posted on the job site. The disturbance coordinator shall record the name, phone number, and nature of all complaints received regarding the construction site. The disturbance coordinator shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

3. Each day it does not rain, wet all exposed soil frequently enough to prevent significant amounts of dust from leaving the site.

G. Construction of improvements shall comply with the requirements and recommendations of the accepted soil report by Tharp and Associates dated April 2005. The geotechnical engineer shall inspect the completed project and certify in writing that the improvements have been constructed in conformance with any geotechnical recommendations.

H. All required land division improvements must be installed and inspected prior to final inspection clearance for any new structure on the new lots.

I. The project engineer who prepares the grading plans must certify in writing that the grading was completed in conformance with the approved tentative map and/or engineered improvement plans.

V. All future development on lots created by this subdivision shall comply with the requirements set forth in Condition II.E, above.

VI. In the event that future County inspections of the subject property disclose non-compliance with any Conditions of this Approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including Approval revocation.

VII. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceedmg against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

E. Within 30 days of the issuance of this development approval, the Development Approval Holder shall record in the office of the Santa Cruz County Recorder an agreement, which incorporates the provisions of this condition, or this development approval shall become null and void.

VIII. Mitigation Monitoring Program

The mitigation measures listed under this heading have been incorporated in the conditions of approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resources Code, a monitoring and reporting program for the above mitigation is hereby adopted as a condition of approval for this project. This program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the conditions of approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to section 18.10.462 of the Santa Cruz County Code.

A. Mitigation Measure: Pre-construction Meetings for Compliance (Conditions III.A. and IV.A.

1. Monitoring Program: In order In order to ensure that the mitigation measures B and C (below) are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene two pre-construction meetings on the site. The project planner will review the Final Map **and** Improvement Plans to verify that proper notation regarding the required site meetings are in place.

B. Mitigation Measure: Soil Contamination Remediation (Conditions I.E., III.E.2., III.E.3.a., IV.B and IV.D.)

1. Monitoring Program: In order to prevent impacts from disturbance of soils that contain DDT, DDT breakdown products DDD and DDE, and Dieldrin, the remediation work must be completed under the supervision of Environmental Health Services – Hazardous Material staff (EHS) and the contaminated soils removed, prior *to* commencing with work on the subdivision improvements. To ensure compliance, the applicant is required to submit a revised remediation plan to EHS for review and approval prior to submitting the Final Map for recordation. The project planner will require that a copy of the revised remediation plan and a review and approval letter from EHS staff be submitted prior to or in conjunction with the submittal of the Final Map and Improvement Plans for review, approval and recordation. The project planner will review the plans to ensure compliance with the notation regarding cleanup and commencement dates and the Final Map cannot be recorded until it is approved by the project planner and the Planning Director for compliance with the conditions of approval. Environmental Planning, the Department of Public Works staff and Planning staff must coordinate and verify that the remediation work has been completed and accepted by EHS before allowing the work on the subdivision improvements to begin.

AMENDMENTS TO THIS LAND DIVISION APPROVAL SHALL BE PROCESSED IN ACCORDANCE WITH CHAPTER 18.10 OF THE COUNTY CODE.

This Tentative Map is approved subject to the above conditions and the attached map, and expires 24 months after the 14-day appeal period. The Final Map for this subdivision, including improvement plans, should be submitted to the County Surveyor for checking **at least 90 days** prior to the expiration date and in no event later than **3** weeks prior to the expiration date.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Cathy Graves	Cathleen Carr
Principal Planner	Project Planner

Appeals: Any property owner, or other person aggrieved, or **any** other person whose interests are adversely affected **by** any act or determination of the Planning Commission, may appeal the act or determination **to** the Board of Supervisors in accordance with chapter 18.10 of the Santa Cruz County Code.

COUNTY OF SANTA CRUZ
PLANNING DEPARTMENT

Planning Commission
Meeting Date: 4/26/06
Agenda Item: # 8
Time: After 9:00 a.m.

APPLICATION NO. 05-0269

STAFF REPORT TO THE PLANNING COMMISSION

EXHIBIT D

Mitigated Negative Declaration and Initial Study

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR; SANTA CRUZ, CA 95060
(831)454-2580 FAX: (831)454-2131 TDD: (831)454-2123
TOM BURNS, PLANNING DIRECTOR

NEGATIVE DECLAEUTION AND NOTICE OF DETERMINATION

Application Number: OS-0269 **Hulter Construction, for Donna Strohbeen, et ai**

Proposal: to create 13 residential lots including two affordable housing units, to grade approximately 10,000 cubic yards, and implement a toxic waste remediation plan. Requires a Subdivision Permit and Preliminary Grading Approval for two phases ofgrading: phase 1= Soil remediation and phase 2= Subdivision Site preparation. The project is located on the west side of Maciel Avenue between Byer Road and Encina Drive, Live Oak area of Santa Cruz County.

APN: 029-371-18 **Cathleen Carr, Staff Planner**

Zone District: R-1-6

ACTION: Negative Declaration with Mitigations
REVIEW PERIOD ENDS: January 25,2006
This project will be considered at a public hearing by the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

Findings:
This project, if conditioned to comply with required mitigation measures or conditions shown below, will not have significant effect on the environment. The expected environmental impacts of the proiect are documented in the Initial Study on this project attached to the original *of* this notice on file with the Planning Department, County of Santa Cruz, 701 Ocean Street, Santa Cruz, California.

Required Mitigation Measures or Conditions:
_____ None
__XX__ Are Attached

Review Period Ends__January 25, 2006
Date Approved By Environmental Coordinator__~~January 26, 2006~~ March 3,

KEN HART
Environmental Coordinator
(831)454-3127

If this project is approved, complete and file this notice with the Clerk of the Board:

NOTICE OF DETERMINATION

The Final Approval of This Project was Granted by _____

on _____ No EIR was prepared under CEQA

THE PROJECT WAS DETERMINED TO NOT HAVE SIGNIFICANT EFFECT ON THE ENVIRONMENT

Date completed notice filed with Clerk of the Board:_____

CALIFORNIA DEPARTMENT OF FISH AND GAME

CERTIFICATE OF FEE EXEMPTION

De minimis Impact Finding

Project Title/Location (Santa Cruz County):

Application Number: 05-0269 **Hulter Construction. for Donna Strohbeen, et al**
Proposal: to create 13 residential lots including two affordable housing units. to yade approximately 10,000 cubic yards, and implement a toxic waste remediation plan. Requires a Subdivision Permit and Preliminary Grading Approval for two phases of grading: phase 1= Soil remediation and phase 2= Subdivision Site preparation. The project is located on the west side of Maciel Avenue between Byer Road and Encina Drive, Live Oak area of Santa Cruz County.
APN: 029-371-18 **Cathleen Carr, Staff Planner**
Zone District: R-1-6

Findings of Exemption (attach as necessary):

An Initial Study has been prepared for this project by the County Planning Department according to the provisions of CEQA. This analysis shows that the project will not create any potential for adverse environmental effects on wildlife resources.

Certification:

I hereby certify that the public agency has made the above finding and that 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.

KEN **HART**
Environmental Coordinator for
Tom Burns, Planning Director
County of Santa Cruz

Date: 3/6/06

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS, PLANNING DIRECTOR

NOTICE OF ENVIRONMENTAL REVIEW PERIOD

SANTA CRUZ COUNTY

APPLICANT: **Hulter Construction, for Donna Strohbeen, et al**

APPLICATION NO.: **05-0269**

APN: **029-371-18**

The Environmental Coordinator has reviewed the Initial Study for your application and made the following preliminary determination:

XX Negative Declaration
(Your project will not have a significant impact on the environment.)

XX Mitigations will be attached to the Negative Declaration,

_____ No mitigations will be attached.

_____ Environmental Impact Report
(Your project may have a significant effect on the environment. An EIR must be prepared to address the potential impacts.)

As part of the environmental review process required by the California Environmental Quality Act (CEQA), this is your opportunity to respond to the preliminary determination before it is finalized. Please contact Paia Levine, Environmental Coordinator at (831) 454-3178, if you wish to comment on the preliminary determination. Written comments will be received until 5:00 p.m. on the last day of the review period.

Review Period Ends: **January 25,2006**

Cathleen Carr
Staff Planner

Phone: **454-3225**

Date: **December 14,2005**

NAME: Hulter Construction for Donna Strohbeen
APPLICATION: 05-0269
A.P.N: 029-371-08

NEGATIVE DECLARATION MITIGATIONS

A. In order to ensure that the mitigation measures B and C (below) are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene two pre-construction meetings on the site, one prior to each of the two phases of grading. Phase 1 grading is for remediation of contamination; Phase *2* grading is for site work and improvements for the residential subdivision. The following parties shall attend the meetings: applicant, grading contractor supervisor, Santa Cruz County Environmental Health Services (EHS) hazardous materials staff, Department of Public Works grading inspector, and Santa *Cruz* County Resource Planning staff. The purpose of the meeting is to verify that all parties are aware of the project conditions, mitigation measures and the timing of testing, inspecting and reporting requirements. Silt fencing and temporary construction fencing to isolate the work area during the clean up phase of the grading will be inspected at the meeting. Phase *2* pre construction site meeting shall not occur until a site closure letter indicating that clean up is complete has been issued by EHS.

B. In order to prevent impacts from disturbance of soils that contain DDT. DDT breakdown products DDD and DDE, and Dieldrin:

1. Prior to issuance of a grading permit the applicant shall submit a revised , final work plan for review and approval by EHS hazardous materials staff. The plan shall include detailed dust control and sediment control, provision for keeping the area watered, standards for stopping work and buttoning up the site when wind and gusts exceeds certain speeds, haul routes and requirements for covering loaded trucks, perimeter silt fence to prevent soil leaving the site, perimeter construction fence to prevent unauthorized entry and a designated equipment washing area that isolates runoff;

2. All soil material that contains detectable ~~exceeds 1.0 ppm~~ concentrations of DDT DDE or DDD identified through a soil sampling program approved by EHS, or Contains detectable concentrations ~~exceeds .03 ppm~~ of Dieldrin, shall be removed from the site to a Class **3** landfill. EHS staff shall be on site to witness testing and remediation. Test results are subject to the approval of EHS staff;

3. Prior to the completion of remediation grading, start of Phase *2* grading and prior to October 1, the applicant shall submit to Planning staff a site closure letter from EHS staff verifying that the remediation has been satisfactorily completed and target levels of clean up reached. Grading for the subdivision site improvements shall not begin until the closure letter is submitted.

C. To minimize potential for erosion and sedimentation, winter grading (October 15 through **April** 15) will not be approved for Phase 1 grading. If Phase 1 grading has not commenced by August 15 it shall be postponed until the following **April** 15.

Environmental Review Initial Study

Application Number: 05-0269

Date: December 12, 2005, Revised March 2, 2006
Staff Planner: Cathleen Carr

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Hulter Construction

APN: 029-371-18

OWNER: Donna Strohbeen, et. al.

SUPERVISORAL DISTRICT: First

LOCATION: The project is located on the west side of Maciel Avenue between Byer Road and Encina Drive, Live Oak area of Santa Cruz County.

SUMMARY PROJECT DESCRIPTION: Proposal to create 13 residential lots include two affordable housing units and to grade ~~approximately~~ over 10,000 cubic yards and implementation of a toxic waste remediation plan. Requires a Subdivision Permit and Preliminary Grading Approval for two phased grading: Phase I – soil remediation and Phase II – subdivision site preparation.

ALL OF THE FOLLOWING POTENTIAL ENVIRONMENTAL IMPACTS ARE EVALUATED IN THIS INITIAL STUDY. CATEGORIES THAT ARE MARKED HAVE BEEN ANALYZED IN GREATER DETAIL BASED ON PROJECT SPECIFIC INFORMATION.

X	Geology/Soils		Noise
X	Hydrology/Water Supply/Water Quality		Air Quality
	Biological Resources		Public Services & Utilities
	Energy & Natural Resources	X	Land Use, Population & Housing
	Visual Resources & Aesthetics		Cumulative Impacts
	Cultural Resources		Growth Inducement
X	Hazards & Hazardous Materials		Mandatory Findings of Significance
X	Transportation/Traffic		

DISCRETIONARY APPROVAL(S) BEING CONSIDERED

	General Plan Amendment	X	Grading Permit

X	Land Division		Riparian Exception
	Rezoning	___	Other:
	Development Permit	___	
	Coastal Development Permit	___	

NON-LOCAL APPROVALS
Other agencies that must issue permits or authorizations:
Regional Water Quality Control Board; Monterey Bay Air Pollution Control District

ENVIRONMENTAL REVIEW ACTION
On the basis of this Initial Study and supporting documents:

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

✓ 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 the attached mitigation measures have been added to the project. **A** MITIGATED NEGATIVE DECLARATION will be prepared.

___ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Paia Levine	3-2-06
	Date

For: Ken Hart
Environmental Coordinator

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS
Parcel Size: 2.43 acres
Existing Land Use: Former nursery (destroyed by fire)
Vegetation: Weeds, nursery plants, street trees, 2 Oak trees
Slope in area affected by project: ~~2.43 acres~~ 0 - 30% ___ 31 - 100%
Nearby Watercourse: Rodeo Gulch
Distance To: 425 feet

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: No
Water Supply Watershed: No
Groundwater Recharge: No
Timber or Mineral: None
Agricultural Resource: None
Biologically Sensitive Habitat: Mapped –none present
Fire Hazard: No
Floodplain: No
Erosion: Minor
Landslide: None
Liquefaction: Low
Fault Zone: No
Scenic Corridor: No
Historic: No
Archaeology: No
Noise Constraint: No
Electric Power Lines: None
Solar Access: varies
Solar Orientation: vanes
Hazardous Materials: Yes

SERVICES

Fire Protection: Central Fire
School District: Live Oak Elem/SC High
Sewage Disposal: Santa Cruz County Sanitation District
Drainage District: Zone 5
Project Access: Maciel Avenue, Byer Road, Willa Way, Encina Drive
Water Supply: Santa Cruz City Water

PLANNING POLICIES

Zone District: R-1-6
General Plan: R-UL
Special Designation: None

Urban Services Line:	XX Inside	___ Outside
Coastal Zone:	___ Inside	XX Outside

PROJECT SETTING AND BACKGROUND:

The subject parcel was a remainder lot from a previous 17-lot subdivision approved under Permit 98-0564 on June 9, 1999. This remainder lot contained the Antonelli's Begonia Gardens, a family-owned specialty nursery. The main building of the nursery was destroyed by fire early in 2005. An Unconditional Certificate of Compliance was issued and recorded for this lot on 7/26/05 deeming this a legal parcel of record.

The subject parcel is gently sloped with bowl-like depression where rainwater accumulates. There are street trees and sidewalks located along the Byer Road and

Willa Way frontages placed under the previous subdivision. In addition, there are two existing young live oaks and a New Zealand Christmas tree on the site. The remainder of the parcel contains a parking lot and a fire damaged lath house and greenhouses, which are scheduled to be demolished in the near future.

The adjacent subdivision project found that the surface soil was contaminated with DDT and its breakdown products from past agricultural practices and a remediation/clean up was required. Part of the remediation involved placing contaminated soil under the parking lot on the subject parcel, where it was capped and isolated from the surface. That soil under the parking lot, as well soil on other portions of the property that have elevated levels of DDT contaminants and Dieldrin, will be remediated as part of this project. The remediation will precede the residential development.

DETAILED PROJECT DESCRIPTION:

The applicant proposes to divide the parcel into thirteen single family residential parcels, two of which will be affordable housing units. The improvements associated with this project includes about 10,000 cubic yards of earthwork which includes the removal of unsuitable and contaminated soils, excavation and recompaction of about 3,500 cubic yards of earth, and the importation of till, in order to remove contaminated soils, achieve positive drainage for all of the building sites and create suitable building pads on soils with naturally poor load bearing capacity. The project includes a toxic waste remediation plan to remove the soils contaminated with DDT, DDT byproducts and Dieldrin. The site improvements will include new separated sidewalks along Maciel Avenue and Encina Drive, paving improvements to Encina Drive and widening of Maciel Avenue and on-site drainage improvements. Front yard landscaping and street trees will be installed as part of the overall project.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

III. ENVIRONMENTAL REVIEW CHECKLIST

A. Geology and Soils

Does the project have the potential to:

1. Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving:

A.	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 as identified by other substantial evidence?		X	
B.	Seismic ground shaking?		X	
C.	Seismic-related ground failure, including liquefaction?	X		
D.	Landslides?		X	

All of Santa Cruz County *is* subject to some hazard from earthquakes. However, the project site **is** not located within or adjacent to a county or State mapped fault zone. **A** geotechnical investigation for the proposed project was performed by Tharp and Associates dated April 2005 (Attachment 6). The report concluded that the liquefaction and seismic shaking hazards are low for this site. The surface soils were found to be highly compressive and the soils engineer is recommending either removal of the surface soils or the use of pier and grade beam foundations to address this condition.

2. Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, to subsidence, liquefaction, or structural collapse? X

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

The report cited above concluded that there is a potential risk from compressive surface soils. The recommendations contained in the geotechnical report are to remove the surface soils and replace with engineered fill or to use pier and grade beam foundations. The project will be conditioned to require that the foundation designs must conform to the soil report recommendations and a letter of plan review and approval must be submitted prior to approval of any building permits.

This project also includes a toxic waste remediation plan that includes grading to remove contaminated soil (Attachment 8). See Section G.2. for further discussion

3. Develop land with a slope exceeding 30%? X

No slopes exceeding 30% are on the property

4. Result in soil erosion or the substantial loss of topsoil? X

The potential for erosion exists during the construction phase of the project, though the project areas to be disturbed are gently sloped. Standard erosion controls are a required condition of the project. Rodeo Gulch is in proximity (about 450 feet) to the project. Prior to approval of the final improvement plans for the subdivision and grading or building permits the project must have an approved Erosion Control Plan, which will specify detailed erosion and sedimentation control measures. The plan will include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion. In addition, the final remediation plan for the contaminated soil will include detailed provisions for dust control and sediment control.

5. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code(1994), creating substantial risks to property? X

The geotechnical report for the project did not identify any elevated risk associated with expansive soils.

6. Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems? X

No septic systems are proposed. The project will connect to the Santa Cruz County Sanitation District, and the applicant will be required to pay standard sewer connection

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

and service fees that fund sanitation improvements within the district as a Condition of Approval for the project. A project has received a will serve letter (Attachment 12).

7. Result in coastal cliff erosion? X

E c logy, \ at S y and Wa Quality

Does the project av th tential to:

1. Place development within a 100-year flood hazard area? X

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated April 15, 1986, no portion of the project site lies within a 100-year flood hazard area.

2. Place development within the floodway resulting in impedance or redirection of flood flows? X

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated April 15, 1986, no portion of the project site lies within a 100-year flood hazard area.

3. Be inundated by a seiche or tsunami? X

4. Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit, or a significant contribution to an existing net deficit in available supply, or a significant lowering of the local groundwater table? X

The project will obtain water from the City of Santa Cruz Water Department and will not rely on private well water. Although the project will incrementally increase water demand, the City of Santa Cruz has indicated that adequate supplies are available to serve the project (Attachment 11). The project is not located in a mapped groundwater recharge area.

	Significant Or Potentially Significant Impact	Less than Significant uirh Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
5. Degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).		X		

If the contaminated soils were not removed, runoff from this project could contain amounts of DDT and its breakdown components and the chemical Dieldrin. **A** toxic waste remediation program *is* required to remove the contaminated soils from this site. See Section G.2. for further discussion.

Once remediation is complete, the runoff from this project may contain small amounts of household chemicals and other household contaminants, but will not contribute a significant amount of contaminants to a public or private water supply. Potential siltation from the proposed project will be mitigated through implementation *of* erosion control measures.

6.	Degrade septic system functioning?			X	

There is no indication that existing septic systems in the vicinity would be affected by the project.

7.	Alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which could result in flooding, erosion, or siltation on or off-site?		X		

The proposed project will slightly alter the drainage pattern on the site itself as there is a low lying area in which rainwater accumulates. The site grading to fill the depression and achieve positive drainage will not change the overall direction of the site drainage. The site is about 425 to 450 feet away from Rodeo Gulch, the nearest watercourse, and will not alter the existing overall drainage pattern *of* the vicinity. Department of Public Works Drainage Section staff has reviewed and approved the proposed drainage plan.

8.	Create or contribute runoff which would exceed the capacity ***of*** existing or planned storm water drainage systems, or create additional source(s) ***of*** polluted runoff?		X		

Drainage Calculations prepared by lfland Engineers, dated 09/06/05, have been reviewed for potential drainage impacts and accepted by the Department of Public Works (DPW) Drainage Section staff. The calculations show that the post-

	Significant Or Potentially Significant Impact	Less than Significant *with* Mitigation Incorporation	Less than Significant Or No impact	Not Applicable

development runoff will decrease by about 0.28 cfs, as there will be a net reduction in impervious surfaces by replacing the commercial nursery, greenhouses and parking lot with a residential subdivision. DPW staff has determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. Refer to response B-5 for discussion of urban contaminants and/or other polluting runoff.

9.	Contribute *to* flood levels or erosion in natural water courses by discharges of newly collected runoff?			X	

No new impervious surfaces are proposed as part of the project, thus there will be no additional storm water runoff that could contribute to flooding or erosion.

10.	Otherwise substantially degrade water supply or quality?			X	

On site water quality treatment will be accomplished through the use of bio-swales and where infeasible, silt and grease traps to minimize the effects of urban pollutants.

C. Biological Resources

Does the project have the potential to:

1.	Have an adverse effect 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	

According to the California Natural Diversity Data Base (CNDDB), maintained by the California Department of Fish and Game, the property **is** located within a mapped habitat area for the Santa Cruz tarplant. The property has been developed as a commercial nursery since 1935. The lack of suitable habitat and the disturbed nature of the site make it unlikely that any special status plant or animal species occur in the area.

2.	Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.)?			X	

There are no mapped or designated sensitive biotic communities on or adjacent to the

	Significant Or Potentially significant Impact	Less than Significant with Mirigation Incorporation	Less than Significant Or No Impact	Not Applicable

project site.

3. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident *or* migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites? — X

The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site.

4. Produce nighttime lighting that will illuminate animal habitats? — X

The subject property is located in an urbanized area and is surrounded by existing residential development that currently generates nighttime lighting. There are no sensitive animal habitats within or adjacent to the project site.

5. Make a significant contribution to the reduction of the number of species of plants or animals? — X

See C-1 above.

6. Conflict with any local policies or ordinances protecting biological resources (such as the Significant Tree Protection Ordinance, Sensitive Habitat Ordinance, provisions of the Design Review ordinance protecting trees with trunk sizes of 6 inch diameters or greater)? — X

The project will not conflict with any local policies or ordinances.

7. Conflict with the provisions of an adopted Habitat Conservation Plan, Biotic Conservation Easement, or other approved local, regional, or state habitat conservation plan? — X

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
D. Energy and Natural Resources Does the project have the potential to:				
1. Affect or be affected by land designated as "Timber Resources" by the General Plan?			X	

The project is in the urban area of the County.

2. Affect or be affected by lands currently utilized for agriculture, or designated in the General Plan for agricultural use?			X	

The project site is was formerly a non-conform...ıg commercial nursery that had been grandfathered in since it had existed at this site since the 1930's. The property is in an urban area and is not suited for continued agricultural use. The nursery was severely damaged by a fire in early 2005 and the remaining greenhouses are scheduled for demolition. No agricultural uses are proposed for the site or surrounding vicinity.

3. Encourage activities that result in the use of large amounts of fuel, water, or energy, or use of these in a wasteful manner?			X	
4. Have a substantial effect on the potential use, extraction, or depletion of a natural resource (i.e., minerals or energy resources)?			X	
E. Visual Resources and Aesthetics Does the project have the potential to:				
1. Have an adverse effect on a scenic resource, including visual obstruction of that resource?			X	

The project will not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

	Significant Or Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
2. Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings?			X	

The project site is not located along a County designated scenic road or within a designated scenic resource area.

3. Degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, andlor development on a ridge line?				

The existing visual setting is an urban residential neighborhood. The proposed subdivision is designed and landscaped so as to fit into this setting.

4. Create a new source of light or glare which would adversely affect day or nighttime views in the area?			X	

The project will create an incremental increase in night lighting. However, this increase will be small, and will be similar in character to the lighting associated with the surrounding existing uses.

5. Destroy, cover, or modify any unique geologic or physical feature?				X

There are no unique geological or physical features on or adjacent to the site that would be destroyed, covered, or modified by the project.

F. Cultural Resources

Does the project have the potential to:

1. Cause an adverse change in the significance of a historical resource as defined in **CEQA** Guidelines 15064.5?				X

The existing structure(s) on the property are not designated as a historic resource on any federal, State or local inventory.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significam Or No Impact	Not Applicable
2. Cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5?			X	

No archeological resources have been identified in the project area. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, any human remains of any age, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

3. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4. Directly or indirectly destroy a unique paleontological resource or site?			X	

G. Hazards and Hazardous Materials
Does the project have the potential to:

1. Create a significant hazard to the public or the environment as a result of the routine transport, storage, use, or disposal of hazardous materials, not including gasoline or other motor fuels?			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
2. 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		

The project site is included on the 07/21/2005 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code, but is shown as closed in 1999. A portion of this site was remediated when a portion of the nursery property was partitioned and subdivided for a residential development in 1999. Part of the 1999 remediation work placed contaminated soils on the remaining nursery lot underneath a new parking lot. This project involves the subdivision of the remaining portion of the nursery, which contains areas of soils contaminated with DDT, DDE, DDD and Dieldrin exceeding residential Preliminary Remediation Goals (PRG). A Remediation Plan, approved by County Environmental Health Services, has been submitted (Attachment 8 and 9). The remediation plan is currently undergoing revision to reduce the target levels of the clean-up from 1 ppm (DDX) and 0.03 ppm Dieldrin to non-detectable levels. The plan will involves the removal of ~~a minimum of 1,500 cubic yards~~ the contaminated materials from four areas of the subject parcel and disposal of this material in a Class III landfill in Marina. The remediation work will be supervised by the consulting geologist and Environmental Health Services (EHS) Hazardous Materials staff. EHS staff shall be notified in advance of commencement of the remedial grading, to ensure that EHS staff is on site to monitor the remediation work. Work will not be allowed in windy conditions (> 15 mph or less, if so specified in the plan) In addition, the soils will be continuously wetted by a water truck or fire hose during excavation to ensure contaminated dust particles do not leave the site. Trucks will be covered and haul routes identified and approved in advance. The work to remove the contaminated soil will be part of the first phase grading permit for this project. In order to minimize the potential for contaminated runoff, the remedial grading shall not occur during the winter grading season (between October 15 and April 15). At the completion of the phase I grading (remediation), the applicant will be required to submit a letter from the consulting geologist and EHS staff to Planning staff. This letter must approve the results and verify that the property has been successfully remediated.

3. Create a safety hazard for people residing or working in the project area as a result of dangers from aircraft using a public or private airport located within two miles of the project site?			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
4. Expose people to electro-magnetic fields associated with electrical transmission lines?				X
5. Create a potential fire hazard?				X

The project design incorporates all applicable fire safety code requirements and will include fire protection devices as required by the local fire agency.

6. Release bio-engineered organisms or chemicals into the air outside of project buildings?				X

H. Transportation/Traffic

Does the project have the potential to:

1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	

The project will create an incremental increase in traffic on nearby roads and intersections. However, given the small number of new trips created by the project (13 PM peak trips per day for the new subdivision), this increase is less than significant. Further, the increase will not cause the Level of Service at any nearby intersection to drop below Level of Service D.

2. Cause an increase in parking demand which cannot be accommodated by existing parking facilities?			X	

The project meets the code requirements for the required number of parking spaces and therefore new parking demand will be accommodated on site.

3. Increase hazards to motorists, bicyclists, or pedestrians?			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

The proposed project will comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians. Full curbs and separated sidewalks will be constructed where none currently exist on all of the parcel's frontages, thereby facilitating pedestrian access in the area.

4.	Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the county congestion management agency for designated intersections, roads or highways?		X	

See response H-1 above.

I. Noise

Does the project have the potential to:

1.	Generate a permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X	

The project will create an incremental increase in the existing noise environment. However, this increase will be small, and will be similar in character to noise generated by the surrounding existing uses.

2.	Expose people to noise levels in excess of standards established in the General Plan, or applicable standards of other agencies?		X	

Per County policy, average hourly noise levels shall not exceed the General Plan threshold *of* 50 L_{eq} during the day and 45 L_{eq} during the nighttime. Impulsive noise levels shall not exceed 65 db during the day or 60 db at night. Acoustic studies for nearby projects have shown that traffic noise along Capitola Road can exceed these standards. **An** acoustic study was completed for the 1999 subdivision of a portion of the nursery immediately adjacent to Capitola Road, which showed that the traffic along Capitola Road and a masonry sound wall was constructed to mitigate for this potential impact. The masonry sound wall, and two rows of two-story dwellings and a residential street are located between the project site and Capitola Road.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
3. Generate a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

Noise generated during construction will increase the ambient noise levels for adjoining areas. Construction will be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

J. Air **Quality**

Does the project have the potential to:
(Where available, the significance criteria established by the MBUAPCD may be relied upon to make the following determinations).

1. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	

The North Central Coast Air Basin does not meet State standards for ozone and particulate matter (PM10). Therefore, the regional pollutants *of* concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NOx]), and dust.

Given the modest amount of new traffic that will be generated by the project there is no indication that new emissions of VOCs or NOx will exceed Monterey Bay Unified Air Pollution Control District (MBUAPCD) thresholds for these pollutants and therefore there will not be *a* significant contribution to an existing air quality violation.
Project construction may result in a short-term, localized decrease in air quality due to generation of dust. However, standard dust control best management practices, such as periodic watering, will be implemented during construction to reduce impacts to a less than significant level.

Currently, there is a potential for dust contaminated with DDT, DDT byproducts and Dieldrin from becoming airborne at this site. The remediation work proposed as part of this project will remove the contaminated soils from this site, thereby reducing potential air pollution. See Section G and the remediation work plan (Attachment **8)** for information on the remediation.

2. Conflict with or obstruct implementation of an adopted air quality plan?			X	

The project will not conflict with or obstruct implementation of the regional air quality

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
plan. See J-1 above.				
3. Expose sensitive receptors to substantial pollutant concentrations? See J-1 and Section G			X	
4. Create objectionable odors affecting a substantial number of people?				X

K. Public Services and Utilities

Does the project have the potential to:

1. Result in the need for new or physically altered public 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:				
a. Fire protection?			X	
b. Police protection?			**X**	
c. Schools?			X	
d. Parks or other recreational activities?			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
e. Other public facilities; including the maintenance of roads?			X	

While the project represents an incremental contribution to the need for services, the increase will be minimal. Moreover, the project meets all of the standards and requirements identified by the Central Fire agency, and school, park, and transportation fees to be paid by the applicant will be used to offset the incremental increase in demand for school and recreational facilities and public roads.

2. Result in the need for construction of new storm water drainage facilities or expansion *of* existing facilities, the construction of which could cause significant environmental effects?			X	

Drainage analysis of the project concluded that the existing facilities are adequate for the proposed site runoff. Department of Public Works Drainage staff have reviewed the drainage information and have determined that downstream storm facilities are adequate to handle the drainage associated with the project (Attachment 7). Overall there will be a decrease in runoff relative to the existing condition.

3. Result in the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				

The project will connect to an existing municipal water supply. Santa Cruz Water Department has determined that adequate supplies are available to serve the project (Attachment 11).

Municipal sewer service is available to serve the project, as reflected in the attached letter from the Santa Cruz County Sanitation District (Attachment **12).**

4. Cause a violation of wastewater treatment standards of the Regional Water Quality Control Board?			X	

The project's wastewater flows will not violate any wastewater treatment standards.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
5. Create a situation in which water supplies are inadequate to serve the project or provide fire protection?			X	

The water mains serving the project site provide adequate flows and pressure for fire suppression. Additionally, the local fire agency or California Department of Forestry, as appropriate, has reviewed and approved the project plans, assuring conformity with fire protection standards that include minimum requirements for water supply for fire protection.

6. Result in inadequate access for fire protection?			**X**	

The project's road access meets County standards and has been approved by the Central Fire.

7. Make a significant contribution to a cumulative reduction of landfill capacity or ability to properly dispose of refuse?			X	

The project will make an incremental contribution to the reduced capacity of regional landfills. However, this contribution will be relatively small and will be of similar magnitude *to* that created by existing land uses around the project.

8. Result in a breach of federal, state, and local statutes and regulations related to solid waste management?			X	

L. Land Use, Population. and Housing

Does the project have the potential to:

1. Conflict with any policy of the County adopted for the purpose of avoiding or mitigating an environmental effect?			X	

The proposed project does not conflict with any policies adopted for the purpose of avoiding or mitigating an environmental effect. The project meets all of the County General Plan policies for urban residential infill development and meets the General Plan residential density requirements.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
2. Conflict with any County Code regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

The proposed project does not conflict with any regulations adopted for the purpose of avoiding or mitigating an environmental effect. The project meets all of the Zoning regulations, site development standards and affordable housing requirements.

3. Physically divide an established community?				X

The project will not include any element that will physically divide an established community.

4. Have a potentially significant growth inducing effect, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

The proposed project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Additionally, the project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it is not expected to have a significant growth-inducing effect.

5. Displace substantial numbers of people, or amount of existing housing, necessitating the construction of replacement housing elsewhere?			X	

The proposed project will entail a net gain in housing units.

M. Non-Local Approvals

Does the project require approval of federal, state, or regional agencies? Yes X No

Regional Water Quality Control Board and the Monterey Bay Air Pollution Control District.

N. Mandatory Findings of Significance

1. 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, substantially reduce the number or restrict the range of a rare or endangered plant, animal, or natural community, or eliminate important examples of the major periods of California history or prehistory? Yes ____ No **X**

2.	Does the project have the potential to achieve short term, to the disadvantage of long term environmental goals? (A short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long term impacts endure well into the future)	Yes ____	No **X**
3.	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 past projects, and the effects of reasonably foreseeable future projects which have entered the Environmental Review stage)?	Yes	No X
4.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Yes ____	No X

TECHNICAL REVIEW CHECKLIST

	REQUIRED	COMPLETED*	N/A
Agricultural Policy Advisory Commission (APAC) Review			X
Archaeological Review			X
Biotic Report/Assessment			X
Geologic Hazards Assessment (GHA)			X
Geologic Report			X
Geotechnical (Soils) Report		**YES**	
Riparian Pre-Site			X
Septic Lot Check			X
Other: Remediation Plan		YES	

Attachments:

For all construction projects:

1. Vicinity Map
2. Map of Zoning Districts
3. Map of General Plan Designations
4. Project Plans (Tentative Map & Preliminary Improvement Plans prepared by Ifland Engineers, dated 09/08/05; Landscape Plan prepared by Gregory Lewis, last revised 10/14/05)
5. Geotechnical Review Letter prepared by Kent Edler, dated May 26, 2005
6. Geotechnical Investigation (Conclusions and Recommendations) prepared by Tharp and Associates dated April 2005
7. Drainage calculations prepared by If Ifland Engineers, dated 09/06/05
8. Remediation Plan prepared by Weber, Hayes & Associates, dated April 4, 2005
9. Remediation Plan acceptance letter by Rolando Charles EHS III, dated April 13, 2005
10. Discretionary Application Comments, various dates printed on December 5, 2005
11. Letter from Santa Cruz Water Department, dated March 30, 2005
12. Memo from Department of Public Works, Sanitation, dated April 29, 2005
13. Letters rec'd during public agency comment period

Other technical reports or information sources used in preparation **of this Initial Study**

Location Map

Legend

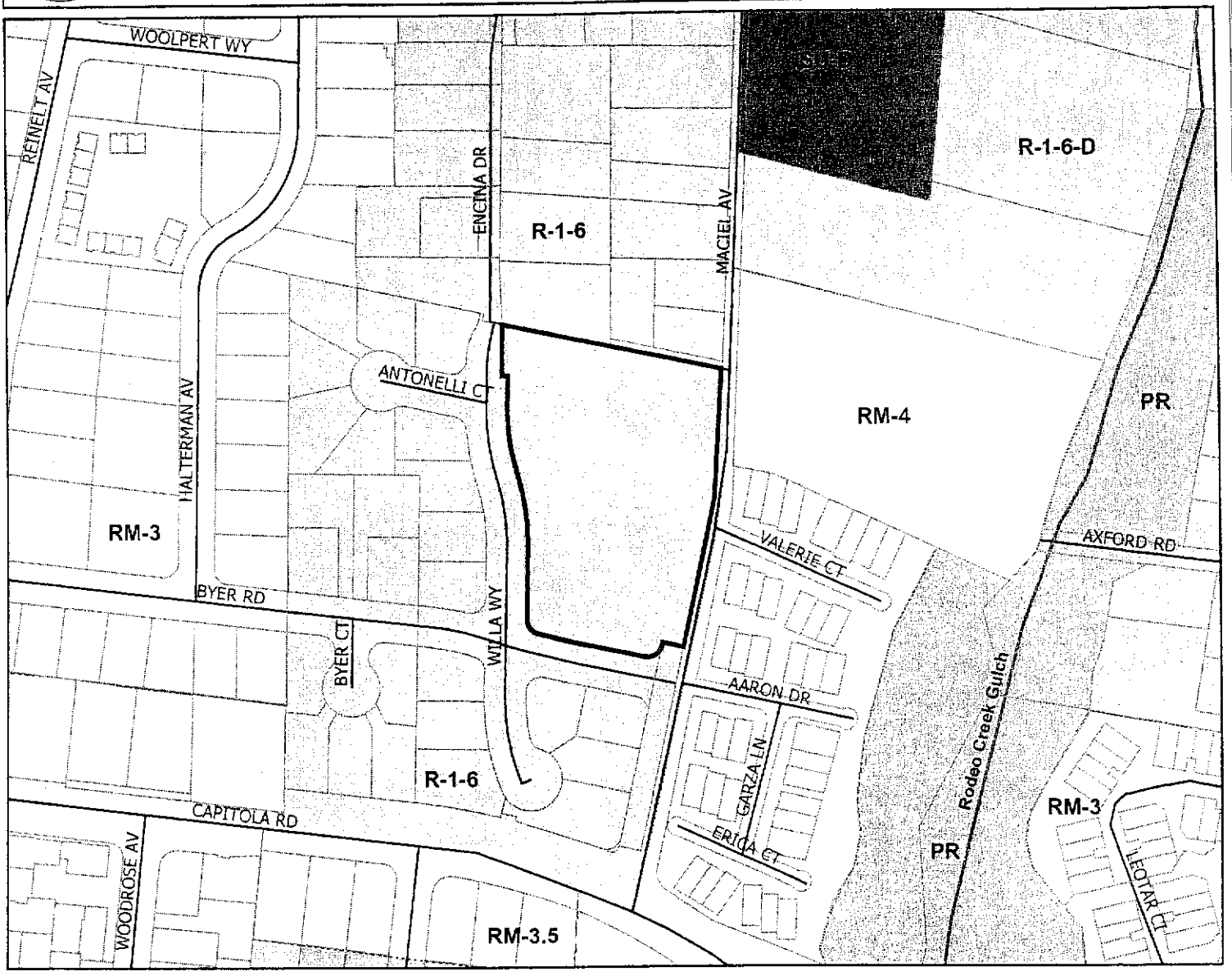
- APN029-371-18
- Assessors Parcels
- PERENNIAL STREAM
- Streets

N
W E

Environmental Review Inital Study
ATTACHMENT 1
APPLICATION 05-0269

Map Created by
County of Santa Cruz
Planning Department
May 2005

Zoning Map



Legend

- APN029-371-18
- Assessors Parcels
- PERENNIAL STREAM
- Streets
- PARK (PR)
- RESIDENTIAL-MULTI FAMILY (RM)
- RESIDENTIAL-SINGLE FAMILY (R-1)
- SPECIAL USE (SU)

N

W E

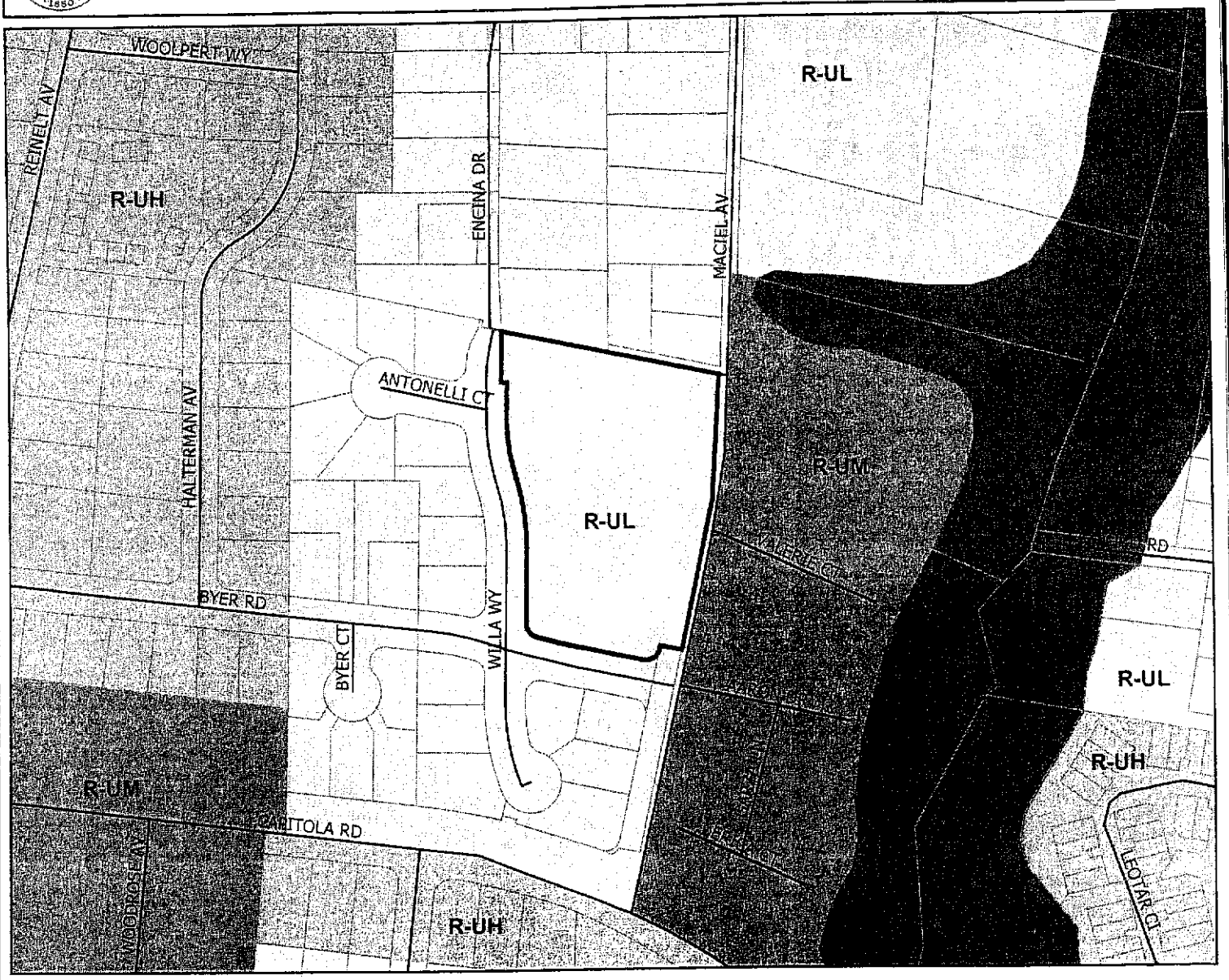
Environmental Review Inital Study

ATTACHMENT 2

APPLICATION 05-0269

Map Created by
County of Santa Cruz
Planning Department
May 2005

General Plan Designation Map



0 185 370 740 1,110 1,480 Feet

Legend

- APN029-371-18
- Assessors Parcels
- PERENNIAL STREAM
- Streets
- Residential - Urban Low Density (R-UL)
- Residential - Urban Medium Density (R-UM)
- Residential - Urban High Density (R-UH)
- Urban Open Space (O-U)

N

W E

Environmental Review Inital Study

Environmer 3

APPLICATION 05-0269

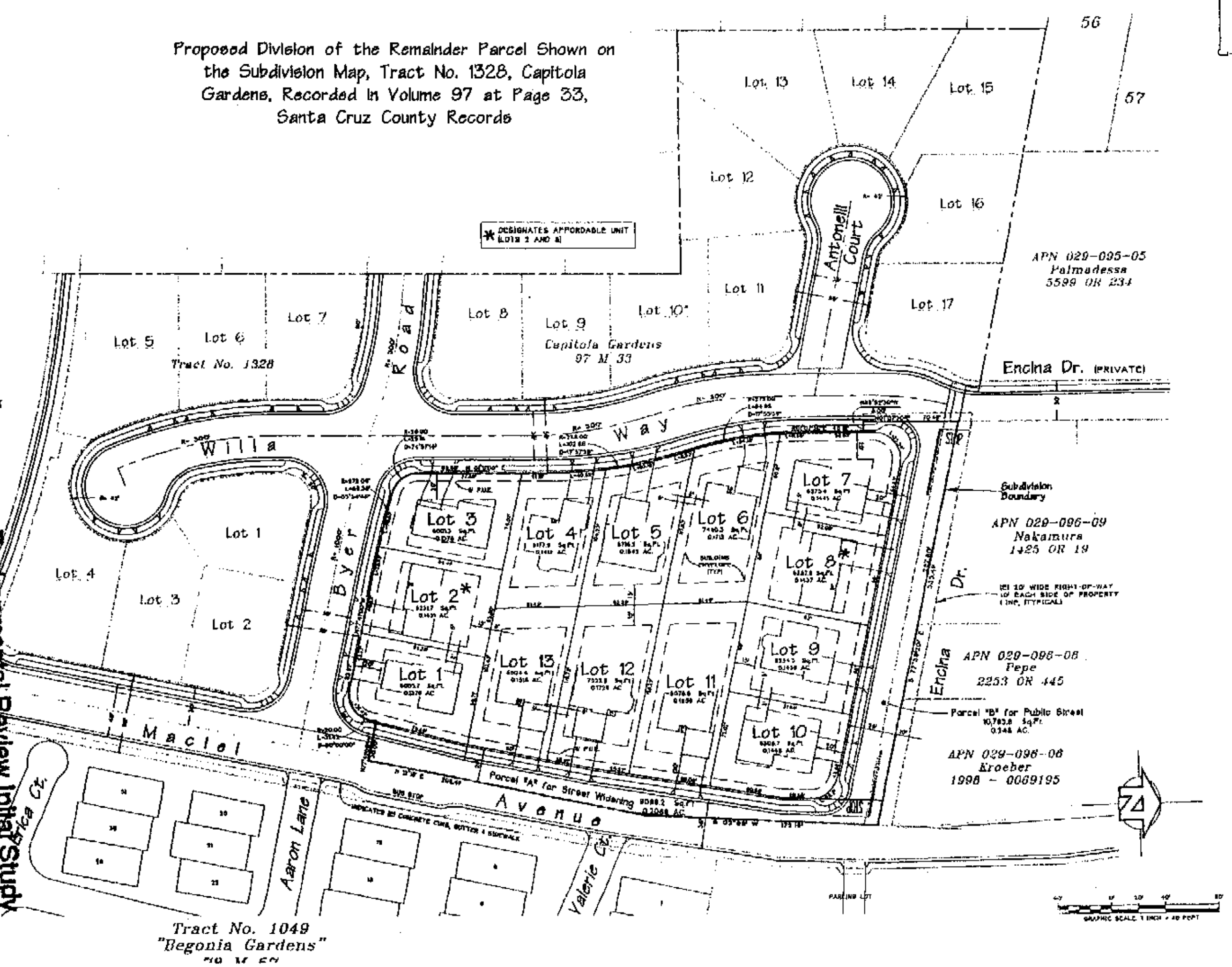
Map Created by
County of Santa Cruz
Planning Department
May 2005

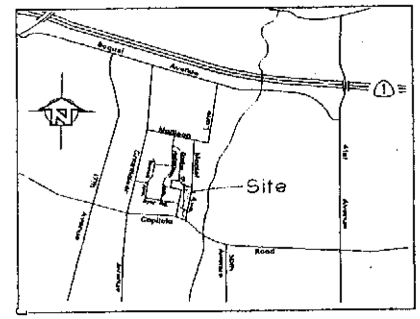
Tentative Map - Tract No. 1506

Capitola Gardens No. 2

Santa Cruz County, California

Proposed Division of the Remainder Parcel Shown on the Subdivision Map, Tract No. 1328, Capitola Gardens, Recorded in Volume 97 at Page 33, Santa Cruz County Records





Vicinity Map
NOT TO SCALE

Project Data

Subdivider & Applicant
Hulter Construction, Inc.
4444 Scotts Valley Drive, Suite 7B
Scotts Valley, CA 95066
Ph. 831-438-6200
Fx. 831-438-6201

Owner
Antonelli Brothers
2545 Capitola Road
Santa Cruz, CA 95062

Existing Zoning
R-1-6

General Plan
Urban Residential low Density

Existing Use
Commercial Flower Growing

Proposed Use
15 Lot Residential Subdivision

Sanitary Sewer
Santa Cruz County Sanitation District

Storm Drain
Santa Cruz County Public Works

Water Service
City of Santa Cruz

Gas & Electric
Pacific Gas & Electric

Cable TV
Comcast Cable

Fire Protection
Central Fire District

Telephone
S.B.C.

Site Area
105,815 Sq.Ft. or 2.43 Acres

Index to Sheets

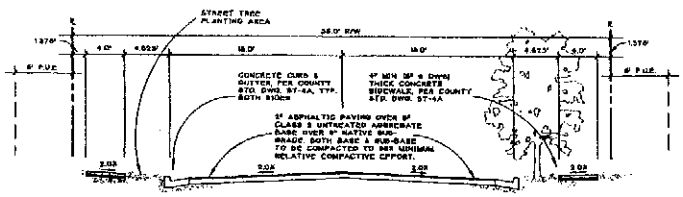
Ifland ENGINEERS, INC.
CIVIL ENGINEERING • LAND SURVEYING • STRUCTURAL DESIGN
1100 WATER STREET
SANTA CRUZ, CA 95062
TEL (831) 426-5313
FAX (831) 426-1763

Tentative Map - Tract No. 1506
Capitola Gardens No. 2
Santa Cruz County, Ca.

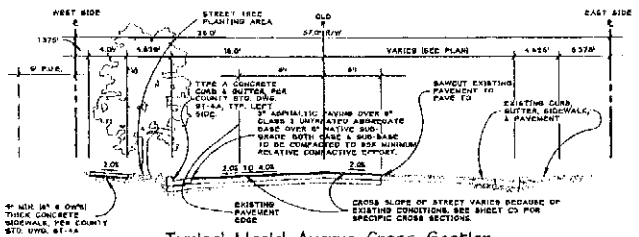
Application No. 05-0269
Assessor's Parcel Number: 029-371-18
DATE 10/6/05 | DESIGN Glen | DRAWN Richard | SCALE 1" = 40'

SHEET TM1 OF 6 SHEETS

Environmental Review Initial Study
ATTACHMENT 4, 1 of 8
APPLICATION 05-0269



Existing Street Section - Willa Way & Byer Road



Typical Maciel Avenue Cross Section

ON-SITE EXISTING IMPERVIOUS SURFACES

PARKING LOT	7,808 SQ. FT.
PAVEMENT	8,410 SQ. FT.
GREENHOUSES (GLASS ROOFS)	31,491 SQ. FT.
MAIN BUILDING BURNED DOWN	9,614 SQ. FT.
TOTAL	57,264 SQ. FT.

REMAINING BUILDINGS ARE LATH OR MESH ROOFED (PERVIOUS)

REMOVE ALL EXISTING BUILDINGS, SHEDS, GREENHOUSES, FENCING, PARKING LOT, PAVING FROM SITE AND DISPOSE OF LAWFULLY.

Capitola Road
Willa Way
Byer Road
Maciel Avenue
Antonelli Court
Encina Dr.
Erica Ct.
Aaron Dr.
Valerie Ct.
LATH HOUSES
GREEN HOUSES
MAIN BUILDING (BURNED DOWN)

Existing Conditions/Demolition Plan

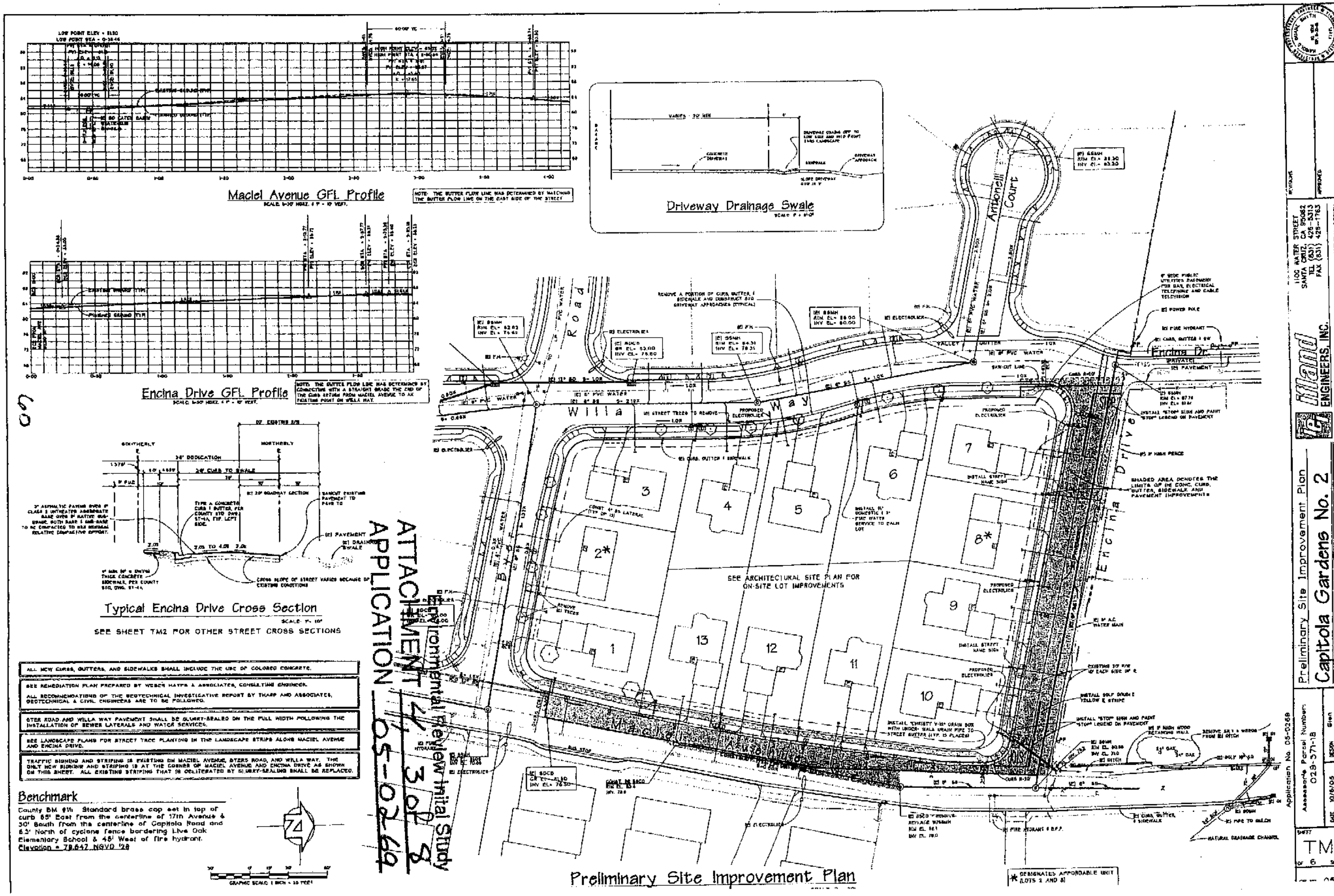
Environmental Review Initial Study
ATTACHMENT 4 pg 8
APPLICATION 05-0269

Bowman & Williams
1100 WATER STREET
SANTA CRUZ, CA 95062
TEL (831) 426-5313
FAX (831) 426-1763
CIVIL ENGINEERING • LAND SURVEYING • STRUCTURAL DESIGN

Existing Conditions/Demolition Plan
Capitola Gardens No. 2
Santa Cruz County, Ca.

Assessor's Parcel Number 028-371-18
Application No. 05-0269
DESIGN Glen
DRAWN James
CHECKED Richard
DATE 10/6/05
SCALE 1" = 30'

SHEET TM2
OF 6 SHEETS


Maciel Avenue GFL Profile
Encina Drive GFL Profile
Driveway Drainage Swale
Typical Encina Drive Cross Section
SEE SHEET TM2 FOR OTHER STREET CROSS SECTIONS
ALL NEW CURBS, GUTTERS, AND SIDEWALKS SHALL INCLUDE THE USE OF COLORED CONCRETE.
Benchmark
County BM #14 Standard brass cap set in top of curb 65' East from the centerline of 17th Avenue & 30' South from the centerline of Capitola Road and 6.5' North of cyclone fence bordering Live Oak Elementary School & 48' West of fire hydrant. Elevation = 78.647 NGVD '29
Willa Way
Encina Drive
Antonelli Court
SEE ARCHITECTURAL SITE PLAN FOR ON-SITE LOT IMPROVEMENTS
Preliminary Site Improvement Plan
* DESIGNATES AFFORDABLE UNIT (LOTS 2 AND 8)
Environmental Review Inital Study
ATTACHMENT 4, 3 of 8
APPLICATION 05-0269
Ifland ENGINEERS, INC.
1100 WATER STREET SANTA CRUZ, CA 95062 TEL (831) 426-5313 FAX (831) 426-1763
CIVIL ENGINEERING • LAND SURVEYING • STRUCTURAL DESIGN
Preliminary Site Improvement Plan
Capitola Gardens No. 2
Santa Cruz County, Ca.
Application No. 05-0269
Assessor's Parcel Number: 029-371-18
TM3
of 6 SHEETS
60

Storm Drainage Calculations

The site area is 2.43 acres. Existing Impervious Surfaces are 57,264 square feet (1.31 Acres). (SEE LIST ON SHEET TM-7)

PRE-DEVELOPMENT:

Q_{10} = (0.90)(2.10)(1.31) + (0.30)(2.10)(1.12) = 3.18 C.F.S.
Q_{100} = (0.90)(2.98)(1.31) + (0.30)(2.98)(1.12) = 4.51 C.F.S.

POST DEVELOPMENT:

Q_{10} = (0.90)(2.10)(1.09) + (0.30)(2.10)(1.34) = 2.90 C.F.S.
Q_{100} = (0.90)(2.98)(1.09) + (0.30)(2.98)(1.34) = 4.12 C.F.S.

WITH THE REMOVAL OF THE EXISTING IMPERVIOUS SURFACES, AND THE CONSTRUCTION OF 13 SINGLE-FAMILY RESIDENCES, THE STORM RUNOFF WILL DECREASE BY APPROXIMATELY 0.28 CUBIC FEET PER SECOND. THEREFORE, NO OFFSITE DRAINAGE IMPROVEMENTS ARE PROPOSED EXCEPT AS SHOWN ON THESE PRELIMINARY PLANS.

THE SOUTHERLY PORTION OF THE SITE DRAINS OFF TO THE EXISTING CATCH BASIN AT THE NORTHWEST CORNER OF MACIEL AVENUE AND DYER ROAD. FROM THERE, THE RUNOFF IS PIPED TO RODEO GULCH ALONG CAPITOLA ROAD. THE NORTHERLY PORTION OF THE SITE DRAINS OFF TO THE SOUTHWESTERLY CORNER OF MACIEL AVENUE AND ENCINA DRIVE WHERE AN 8" CULVERT IS TO BE REPLACED BY A 12" CULVERT AND A NEW CATCH BASIN. THE NEW 12" CULVERT WILL DISCHARGE INTO AN EXISTING DITCH UNTIL IT REACHES A CULVERT UNDER MACIEL AVENUE THAT DISCHARGES INTO RODEO GULCH. RODEO GULCH FLOWS TO CORCORAN LAGOON AND THEN TO MONTEREY BAY.

Benchmark

County BM #11: Standard brass cap set in top of curb 66' East from the centerline of 17th Avenue & 30' South from the centerline of Capitola Road and 8.5' North of cyclone fence bordering Live Oak Elementary School & 45' West of fire hydrant.
Elevation = 79.847 NGVD '29

Proposed Impervious Surfaces

13 HOUSES (2-STORY) @	1,800 S.F. =	23,400 S.F.
13 DRIVEWAYS @	400 S.F. =	5,200 S.F.
13 PATIOS @	150 S.F. =	1,950 S.F.
13 MISC. @	200 S.F. =	2,600 S.F.
STREET IMPROVEMENTS	660 LF @ 22' =	14,300 S.F.
TOTAL		47,450 S.F. (1.09 AC)

Grading Notes

1. NO CHANGES IN THE APPROVED IMPROVEMENT PLANS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.

2. NO LAND CLEARING, GRADING, OR EXCAVATING SHALL TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15 UNLESS A SEPARATE WINTER EROSION CONTROL PLAN IS APPROVED BY THE PLANNING DIRECTOR.

3. NO LAND DISTURBANCE SHALL TAKE PLACE PRIOR TO THE ISSUANCE OF BUILDING PERMITS, EXCEPT THE MINIMUM REQUIRED TO INSTALL STREET IMPROVEMENTS, PROVIDE ACCESS FOR COUNTY REQUIRED TESTS OR TO CARRY OUT OTHER WORK SPECIFICALLY REQUIRED BY ANOTHER OF THESE CONDITIONS.

4. THE CONTRACTOR SHALL APPLY WATER TO ALL EXPOSED EARTH SURFACES AT INTERVALS SUFFICIENT TO PREVENT AIRBORNE DUST FROM LEAVING THE PROJECT SITE. ALL EXPOSED EARTH SHALL BE WATERED DOWN AT THE END OF THE WORK DAY.

5. WHILE IN TRANSIT TO AND FROM THE PROJECT SITE, ALL TRUCKS TRANSPORTING FILL SHALL BE EQUIPPED WITH TARPS.

6. ALL GRADING WORK AND CONSTRUCTION OF IMPROVEMENTS SHALL BE DONE IN ACCORDANCE WITH RECOMMENDATIONS SPECIFIED IN THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE COMPLETED PROJECT AND CERTIFY IN WRITING THAT THE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE GEOTECHNICAL REPORT.

7. PURSUANT TO SECTIONS 16.40.040 AND 16.42.100 OF THE COUNTY CODE, IF AT ANY TIME DURING SITE PREPARATION, EXCAVATION, OR OTHER GROUND DISTURBANCE ASSOCIATED WITH THIS DEVELOPMENT, ANY ARTIFACT OR OTHER EVIDENCE OF AN HISTORIC ARCHAEOLOGICAL RESOURCE OR A NATIVE AMERICAN CULTURAL SITE IS DISCOVERED, THE RESPONSIBLE PERSONS SHALL IMMEDIATELY CEASE AND DESIST FROM ALL FURTHER SITE EXCAVATION AND NOTIFY THE SHERIFF-CORONER IF THE DISCOVERY CONTAINS HUMAN REMAINS, OR THE PLANNING DIRECTOR IF THE DISCOVERY CONTAINS NO HUMAN REMAINS. THE PROCEDURES ESTABLISHED IN SECTIONS 16.40.040 AND 16.42.100, SHALL BE OBSERVED.

8. THE DIRECTOR OF PUBLIC WORKS, OR HIS AUTHORIZED REPRESENTATIVE, SHALL HAVE THE AUTHORITY TO STOP WORK IF THE WORK IS NOT BEING DONE IN ACCORDANCE WITH THE APPROVED IMPROVEMENT PLANS.

9. THE CONTRACTOR SHALL NOTIFY THE COUNTY CONSTRUCTION ENGINEER (408-454-2160) 24 HOURS PRIOR TO START OF CONSTRUCTION.

10. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO, OR USES OF, THESE PLANS. ALL CHANGES MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

11. ALL WORK ADJACENT TO OR WITHIN A COUNTY ROAD SHALL BE SUBJECT TO THE PROVISIONS OF CHAPTER 9.70 OF THE COUNTY CODE, INCLUDING OBTAINING AN ENCROACHMENT PERMIT WHERE REQUIRED. WHERE FEASIBLE, ALL IMPROVEMENTS ADJACENT TO OR AFFECTING A COUNTY ROAD SHALL BE COORDINATED WITH ANY PLANNED COUNTY SPONSORED CONSTRUCTION ON THAT ROAD.

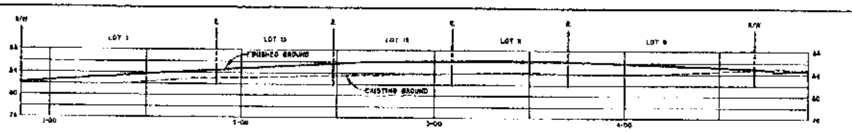
Preliminary Earthwork Quantities

85 CUBIC YARDS EXCAVATION
3,800 CUBIC YARDS OVEREXCAVATION/REDENSIFICATION
1,300 CUBIC YARDS EXPORT - UNSUITABLE SOIL
3,380 CUBIC YARDS FILL
500 CUBIC YARDS REDENSIFICATION SHRINKAGE
3,986 CUBIC YARDS IMPORT

ESTIMATE DOES NOT INCLUDE TRENCH VOLUME OR ANY OVEREXCAVATION, IF REQUIRED BY SITE CONDITIONS.

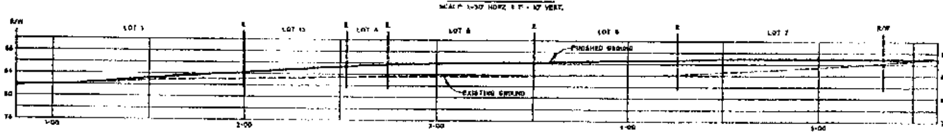
EARTHWORK QUANTITIES ARE PRELIMINARY ESTIMATES ONLY. DURING FINAL PROJECT DESIGN, UNSUITABLE SOILS, EXISTING PAVED SURFACES, AND SITE STRIPPING VOLUMES WILL BE DETERMINED.

Environmental Review Inital Study
ATTACHMENT 4, 4 of 8
APPLICATION 05-0269



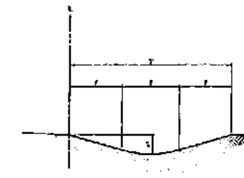
Section B-B

SCALE: 1"=30' HORZ. 1"=10' VERT.



Section C-C

SCALE: 1"=30' HORZ. 1"=10' VERT.

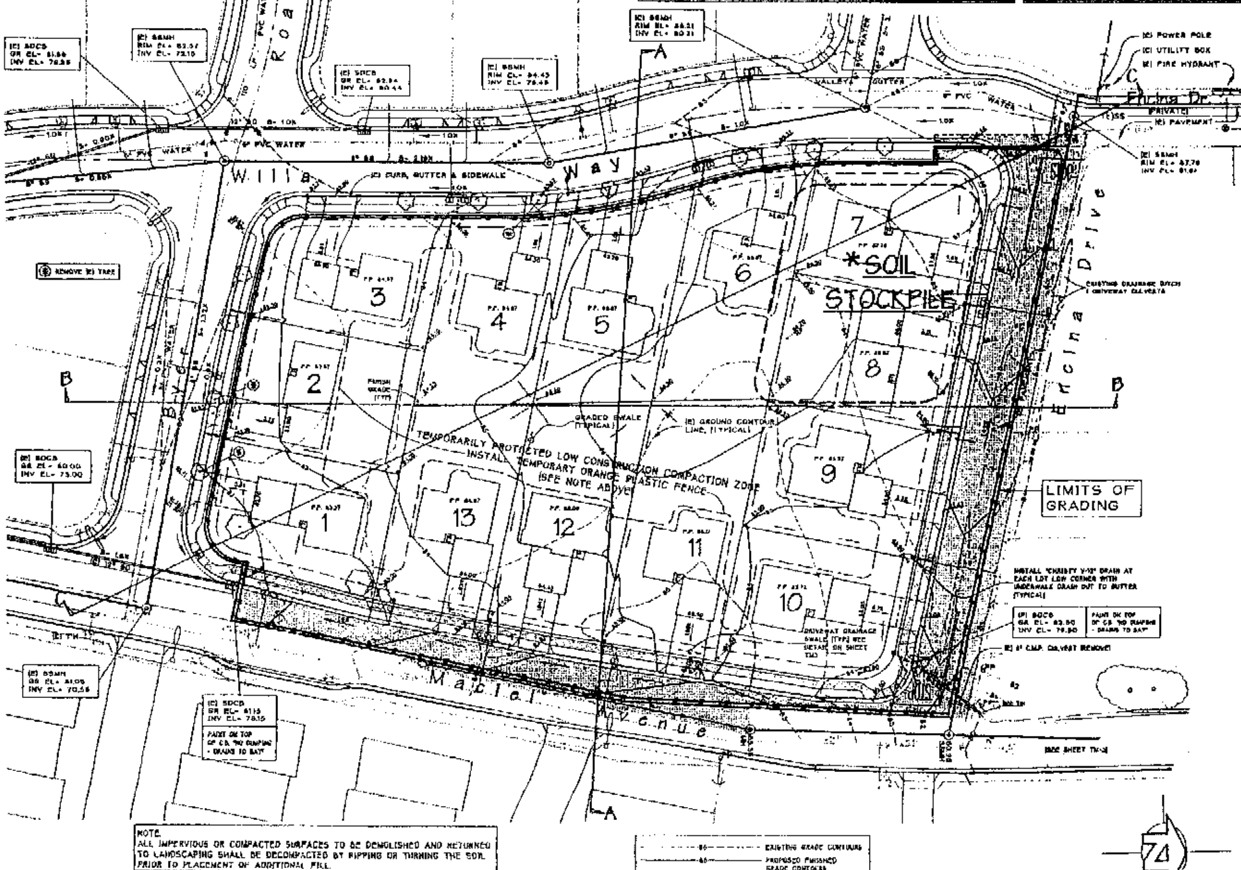


Drainage Swale Detail

INTEGRATE WITH LANDSCAPE

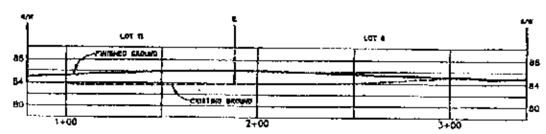
NOTE: GRADING AND FILLING IN AREAS OF FUTURE LANDSCAPING SHALL RECEIVE REDUCED SOIL COMPACTION FROM THE STRUCTURAL HOUSE FOUNDATION AREAS. INSTALL TEMPORARY FENCE TO PROTECT THIS AREA FROM CONSTRUCTION IMPACTS. THE IMPORTED SOIL TO RAISE THESE AREAS TO BE PLACED AND SPREAD BY MOTOR GRADER, BUT NOT MECHANICAL COMPACTION EQUIPMENT.

HOUSE ROOF RUNOFF TO DISCHARGE INTO SIDEYARD SWALES. DOWNSPOUTS TO HAVE SPLASH BLOCKS TO DIRECT RUNOFF AWAY FROM HOUSE FOUNDATIONS - SEE ARCHITECTURAL PLANS.



NOTE
ALL IMPERVIOUS OR COMPACTED SURFACES TO BE DEMOLISHED AND RETURNED TO LANDSCAPING SHALL BE DECOMPACTED BY RIPPING OR TURNING THE SOIL PRIOR TO PLACEMENT OF ADDITIONAL FILL.

EXISTING GRADE CONTOURS
PROPOSED FINISHED GRADE CONTOURS



Section A-A

SCALE: 1"=30' HORZ. 1"=10' VERT.

* DURING THE GRADING OPERATIONS, SOME STOCKPILING OF SOIL WILL BE NECESSARY. THE STOCKPILE IS TO BE KEPT DAMP AND IF NECESSARY, COVERED TO PREVENT DUST FROM BLOWING INTO THE NEIGHBORHOOD. ALL TRUCKS MOVING SOIL ON OR OFF THE SITE ARE TO COVER THE SOIL WITH TARPS. WATER TRUCKS ARE TO BE USED TO KEEP THE SOIL MOIST AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

Preliminary Site Grading & Drainage Plan

Prelim. Grading & Drainage Plan
Capitola Gardens No. 2
Santa Cruz County, Ca.

Application No. 05-0269
Assessor's Parcel Number: 029-371-18
DATE 10/8/05 | DESIGN Glen | SCALE 1" = 30' | DRAWN Richard

SHEET TM4 OF 6 SHEETS

Ifland ENGINEERS, INC.
CIVIL ENGINEERING • LAND SURVEYING • STRUCTURAL DESIGN
1100 WATER STREET
SANTA CRUZ, CA 95062
TEL (831) 426-5313
FAX (831) 426-1763

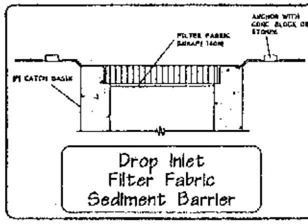
REVISIONS
APPROVED

Erosion Control Notes:

1. Between October 15, and April 15, exposed soil shall be protected from erosion at all times. Hay bales, filter berms, or other means shall be employed to prevent turbid runoff to adjoining properties.
2. All areas on and off site, exposed during construction, if not permanently landscaped per plans, shall be protected by mulching and/or planting of the following SCS approved erosion control mix, at a rate of 35 pounds per acre:

[illegible]	50%
Rose Clover [illegible]	35%
Creeping Red Fescue	15%
Zorro Annual Fescue	Trace
Wildflowers	Trace

3. Unnecessary grading and disturbing of soil shall be avoided.
4. Any excess material shall be disposed of off-site or stockpiled in a manner to avoid runoff onto adjoining properties.
5. Upon completion of construction, all remaining exposed areas shall be permanently revegetated per landscape plans.
6. Any material stockpiled during construction shall be covered with plastic.
7. During construction no turbid site water shall be permitted to enter the channel or storm drain system. Use of silt and grease traps, filter berms, or hay bales may be used to prevent such discharge.
8. Contractor shall notify County of Santa Cruz Erosion Control/Grading Division, (454-3168) at least 48 hours before any earthwork is begun.
9. Landclearing, grading and excavation shall not take place between October 15 and April 15 unless a Winter Grading Approval has been obtained from Environmental Planning.



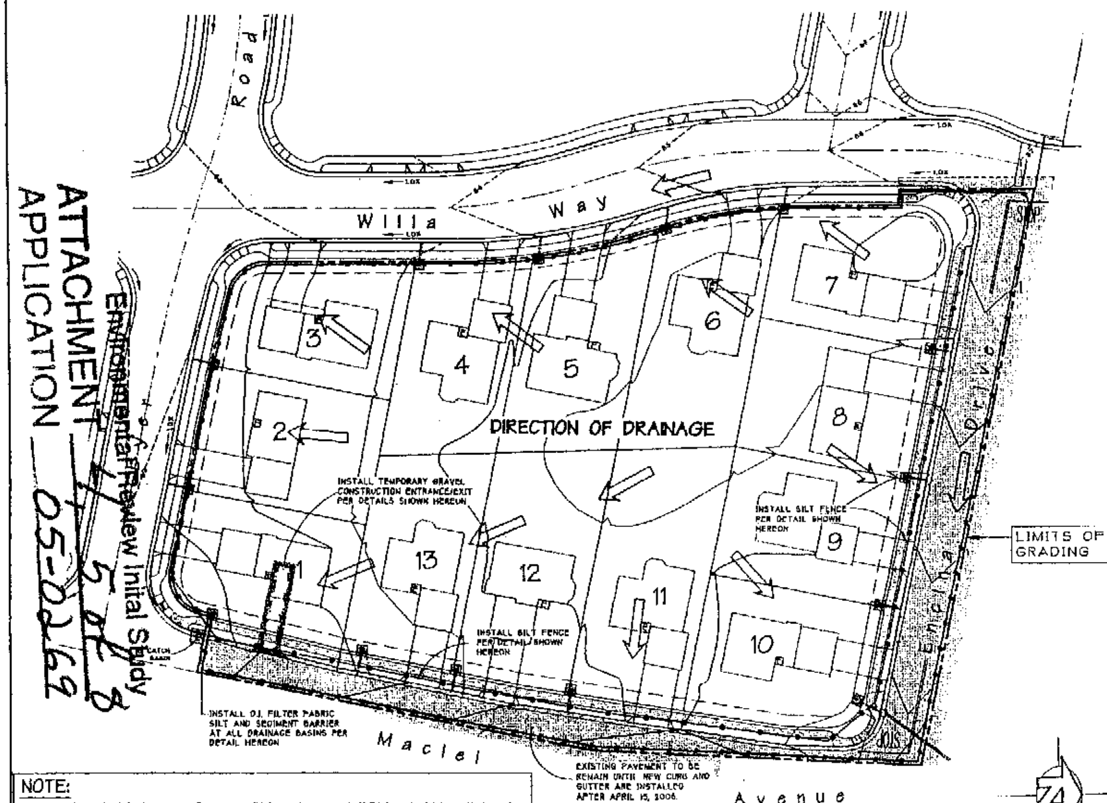
Drop Inlet Filter Fabric Sediment Barrier

INSPECTION AND MAINTENANCE:

FILTER FABRIC BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM (1 INCH RAINFALL IN 24 HOUR PERIOD). ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 3" MAXIMUM HEIGHT. AT THAT TIME INSPECT THE FILTER MATERIAL FOR TEARS AND CLEAN OR REPLACE AS REQUIRED.

THE REMOVED SEDIMENT SHALL BE DISTRIBUTED EVENLY ACROSS AREAS ONSITE, CONFORM WITH THE EXISTING GRADE AND BE REVEGETATED OR OTHERWISE STABILIZED PER EROSION CONTROL NOTES.



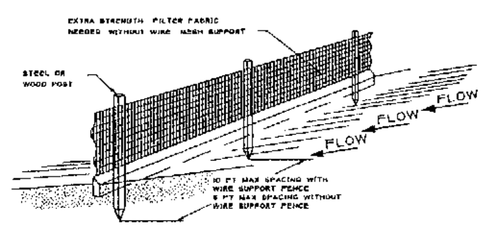
ATTACHMENT 4 5 of 8

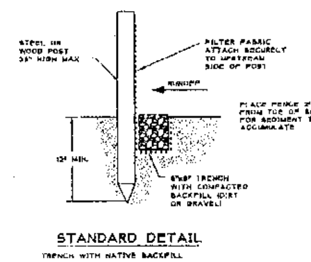
APPLICATION 05-0269

Environmental Review Initial Study

NOTE:
A STORMWATER POLLUTION PREVENTION PLAN WILL BE PREPARED FOR THIS PROJECT AND FILED WITH THE COUNTY AND STATE AGENCIES.

GRAPHIC SCALE 1 INCH = 30 FEET





STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

NOTE:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE

SILT FENCE

Construction Specifications

The height of a silt fence shall not exceed 36 inches. Storage height shall never exceed 12". The fence line shall follow the contour as closely as possible.

If possible, the filter fabric shall be cut from a continuous roll to avoid the use of joints. When joints are necessary, filter cloth shall be spliced only at a support post, with a minimum 6-inch overlap and both ends securely fastened to the post.

Posts shall be spaced a maximum of 10 feet apart and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet. Turn the ends of the fence (last 6 feet) uphill in "J" or "L" shapes to allow for ponding.

A trench shall be excavated approximately 6 inches wide and 6 inches deep along the line of posts and upslope from the barrier.

When standard-strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.

The standard-strength filter fabric shall be stapled or wired to the fence, and 8 inches of the fabric shall extend into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts.

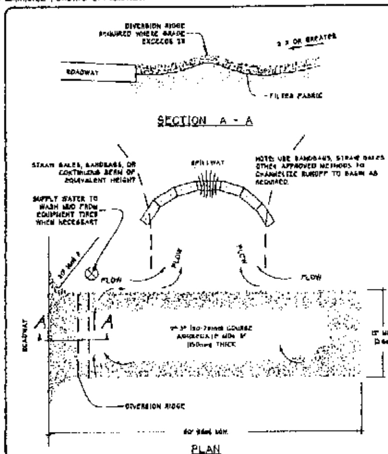
The trench shall be backfilled and the soil compacted over the toe of the filter fabric.

Silt fences placed at the toe of a slope shall be set at 2 to 8 feet from the toe in order to increase ponding volume.

Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized, and any sediment stored behind the silt fence has been removed.

Inspection and Maintenance
Silt fences and filter barriers shall be inspected weekly and after each significant storm (1" in 24 hr). Any required repairs shall be made immediately. Sediment shall be removed when it reaches 1/2 height of the fence or 9 inches maximum.

The removed sediment shall vegetate or otherwise stabilized



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

Temporary Gravel Construction Access

CONSTRUCTION SPECIFICATIONS:

THE AGGREGATE SIZE FOR CONSTRUCTION OF THE PAD SHALL BE 2-3 INCH (50-75 MM) STONE. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.

THE THICKNESS OF THE PAD SHALL NOT BE LESS THAN 6 INCHES (152 MM). USE GEOTEXTILE FABRICS, IF NECESSARY, TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

THE WIDTH OF THE PAD SHALL NOT BE LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS AND IN ANY CASE SHALL NOT BE LESS THAN 12 FEET (3.6 M) WIDE.

THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 50 FEET (15.2 M).

LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID ENTRANCES WHICH HAVE STEEP GRADES AND ENTRANCES AT CURVES IN PUBLIC ROADS.

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR MAINTENANCE OF ANY MEASURES USED TO TRAP SEDIMENT.

ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.

PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.

WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. SEE SEDIMENT BASIN BMP.

ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, STRAW BALES, OR OTHER APPROVED METHODS.

INSPECTION AND MAINTENANCE:

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.

REPLACE GRAVEL MATERIAL WHEN SURFACE VOIDS ARE VISIBLE.

AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.

IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS WITHIN 24 HOURS.

Preliminary Erosion Control Plan
SCALE: 1" = 30'

Application No. 05-0269

Assessor's Parcel Number: 029-371-18	Prelim. Erosion Control Plan
DATE 10/4/05 / DESIGN Glen	Capitola Gardens No. 2
SCALE 1" = 30' / DRAWN Richard	Santa Cruz County, Ca.

SHEET TM5 of 6 SHEETS

Ifland ENGINEERS, INC.
1100 WATER STREET
SANTA CRUZ, CA 95062
TEL (831) 426-5313
FAX (831) 426-1763
CIVIL ENGINEERING • LAND SURVEYING • STRUCTURAL DESIGN

REVISIONS | APPROVED | DATE

ATTACHMENT 4 Exhibit E
APPLICATION 05-0269
Environmental Review Inital Study

eighborhood photo

Application No. 05-0268

Assessor's Parcel Number: 029-371-18		Neighborhood Aerial Photo	
DATE 10/6/05	DESIGN Glen	Capitola Gardens No. 2	
SCALE 1" = 30'	DRAWN Richard	Santa Cruz County, Ca.	

Kland ENGINEERS, INC.
CIVIL ENGINEERING • LAND SURVEYING • STRUCTURAL DESIGN
1100 WATER STREET
SANTA CRUZ, CA 95062
TEL (831) 426-5313
FAX (831) 426-1763

REVISIONS
APPROVED
RCE NO. 18315 DATE

SHEET TM6 OF 6 SHEETS

Plant Legend

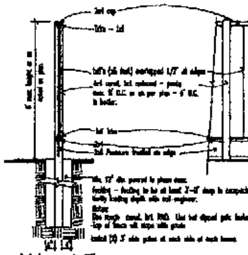
KEY	SIZE	BOTANICAL NAME	COMMON NAME
PC	15 and 24" box	Pistacia chinensis	Chinese Pistache
LI	24" box	Lagerstroemia I. Tuscarora	Crape Myrtle
PK	15 and 24" box	Prunus Krauter Vesuvius	Flowering Plum
AM	15 and 24" box	Arbutus Marina	Strawberry Tree
QA	15	Quercus agrifolia	CA Live Oak
SHRUBS			
GN	5	Grevillea Noell	
PT	5	Pittosporum tobira	
RC	5	Rhaphiolepis Clara or other	Indian Hawthorne
PY	5	Phormium Maori Maiden or Yellow Wave (or other bright colored, medium size flax)	
LC	5	Loropetalum chinense (green)	Chinese Fringe Flower
NC	5	Nandina compacta	Heavenly Bamboo
IC	5	Ilex cornuta rotunda	Low Holly
EP	5	Euryops pectinatus	Gray Euryops
DV	5	Dietes vegeta	Fortnight Lily
RI	5	Rhus integrifolia	Lemonade Berry
XC	5	Xylosma congestum	Shiny Xylosma
GROUND COVERS			
WR	1	Westringia rosmariniformis compacta	
CC	1	Correa Carmine Bells	Australian Fuchsia
SL	1	Salvia leucantha	Mex. Sage
AE	1	Arctostaphylos Emerald Carpet	Low Manzanita
LM	1	Lantana montevidensis	Purple Lantana
AR	1	Artemisia Silver Mound	
LA	1	Lavandula dentata	French Lavender
EK	1	Erigeron karvinskianus	Santa Barbara Daisy
CE	1	Ceanothus Yankee Point	Carmel Creeper
P	1	Phormium Tom Thumb	Small Phormium
Lawn	sod	Turf Tall Fescue and	

CF Creeping Red Fescue plugs at 12" O.C. Planted swales

Another alternative in some situations could be 1 gal. Juncus at 2' O.C. planted at alternating edges of bottom of swale.
Swales are 3 feet wide total by 4" deep including 1 foot wide bottom

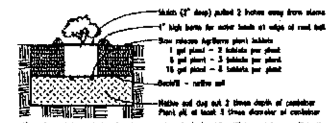
Landscape Notes

[illegible]



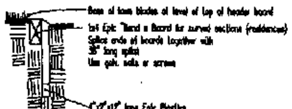
Wood Fence

No Scale



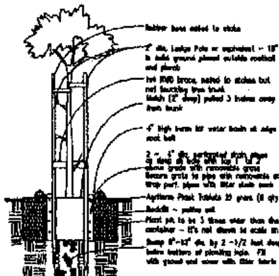
Shrub Planting

No Scale



Lawn Header Board

No Scale



Tree Planting

No Scale

ENVIRONMENTAL REVIEW INITIAL STUDY
ATTACHMENT 4, 7 of 8
APPLICATION 05-0269

Planting Plan

1"=20'-0"

0' 20' 40'

Revision
7-19-05 new site plan County comments
10-14-05 site revisions
tree revisions

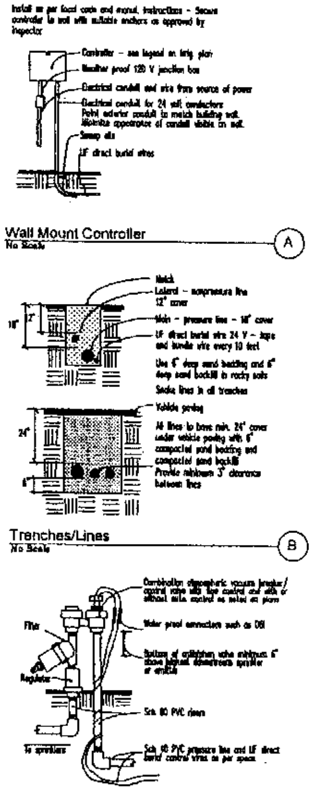
GREGORY LEWIS LANDSCAPE ARCHITECT

13 Residences

Capitola Gardens - Phase 2

Maciel, Byer, Willa Way, Encina Dr., Santa Cruz

L1



Wall Mount Controller
No Scale
(A)

Trenches/Lines
No Scale
(B)

Auto. Antisiphon Valve
with Filter and Regulator for Drip
No Scale
(C)

Irrigation Notes

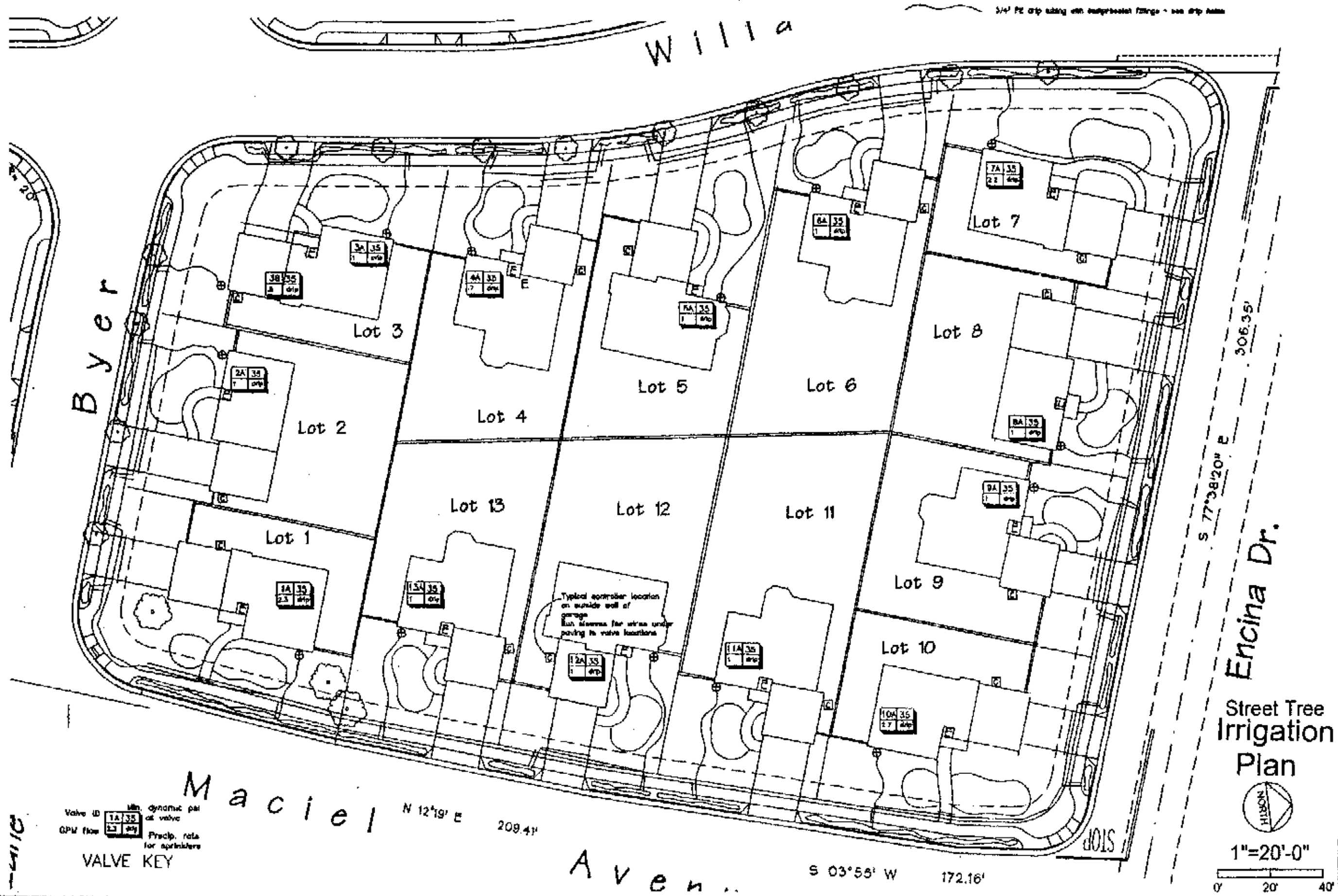
[illegible]

Drip Irrigation Notes

[illegible]

Irrigation Legend

KEY	MANUF.	MANUF. #	DESCRIPTION	RADIUS	GPM Q, H, F	PSI
	TORO		6" pop-up with 8' series nozzle	8'		30
	TORO		6" pop-up with 10' series nozzle	10'		30
	TORO		6" pop-up with 15' series nozzle	15'		30
	TORO		6" pop-up with 18' series nozzle	18'		30
	HUNTER		6" pop-up with 17' series nozzle	17'		35
	Hunter	EC-300	6 station controller for each house - exterior wall mount with multiple programming			
	Rainbird		3/4" antisiphon valve with Sch 80 risers and Union			
	Rainbird		3/4" antisiphon valve with 3/4" Amiad Filter, Senninger PRSG pressure regulator, and adaptor to drip tubing			



Street Tree
Irrigation
Plan

1"=20'-0"
0' 20' 40'

Revision
7-19-05 new site plan County comments
10-14-05 site revisions
tree revisions

GREGORY LEWIS LANDSCAPE ARCHITECT
Santa Cruz, CA

13 Residences
Capitola Gardens - Phase 2
Maciel, Byer, Willa Way, Encina Dr., Santa Cruz

L2

Environmental Review Inital Study
ATTACHMENT 4, 8 of 8
APPLICATION 05-0269

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS, PLANNING DIRECTOR

May 26, 2005

Hutler Construction
4444 Scotts Valley Drive, Suite 7B
Scotts Valley, CA, 95066

Subject: Review **of** Geotechnical Investigation **by** Tharp and Associates, Inc.
Dated April 18, 2005; Project **No.** *05-20*
APN: 029-371-18, Application No: 04-0269
Owner: Donna Strohbeen

Dear Applicant:

The purpose of this letter is to inform you that the Planning Department has accepted the subject report and the following items shall be required:

1. **All** construction shall comply with the recommendations of the report.

2. Final plans shall reference the report and include a statement that the project shall conform to the report's recommendations.

3. Prior *to* building permit issuance a plan review letter shall be submitted to Environmental Planning. The author of the report shall write this letter and shall state that the project plans conform to the report's recommendations.

After building permit issuance the soils engineer *must* remain involved with the project during construction. Please review the Notice *to* Permits Holders (attached).

Our acceptance of the report is limited to its technical content. Other project issues such as zoning, fire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please call the undersigned at 454-3168 if we can be of any further assistance.

Sincerely,

Kent Edler
Associate Civil Engineer

Cc: Cathleen Carr. Project Planner
Bob Loveland, Environmental Planning

Environmental Review Inital Study
ATTACHMENT 5
APPLICATION 05-0269

GEOTECHNICAL INVESTIGATION - DESIGN PHASE
PROPOSED CAPITOLA GARDENS SUBDIVISION
MACIEL AVENUE AND BYER ROAD, CAPITOLA, CALIFORNIA
APN 029-111-49

FOR
Mr. Bill Steiger
Hulter Construction
4400 Scotts Valley Drive, Ste. 7B
Scotts Valley, CA 95066

THARP & ASSOCIATES, INC.
JOB NO. 05-20
APRIL 2005

T H A R P & A S S O C I A T E S, I N C.
SITE ASSESSMENTS • FOUNDATION ENGINEERING CONSTRUCTION MONITORING

347 SPRECKELS DRIVE • *APTOS* • CALIFORNIA • *95003* • Tel: (831) 662-8590 Fax: (831) 662-8592

April 18, 2005
Project No. 05-20

Mr. Bill Steiger
Hulter Construction
4400 Scotts Valley Drive, Ste. 7B
Scotts Valley, CA 95066

SUBJECT: **GEOTECHNICAL INVESTIGATION - DESIGN PHASE**
Proposed Capitola Gardens Subdivision
Maciel Avenue and Byer Road, Capitola, California
APN 029-1 11-49

REFERENCE: Tentative Map - Tract No. 1328 Capitola Gal-dens. 2545 Capitola Road. Santa Cruz Countv. Ca., Sheet 1 of 1, Scale 1 inch = 40 Feet, Dared 11/30/98, Prepared By Ifland Engineers, Inc. Job No. 95164

Dear Mr Steiger,

1 IXTRODUCTIOK

1.1 Puroose

a. This report presents the results of our geotechnical investigation for the proposed new Capitola Gardens Subdivision, located at Maciel Avenue and Byer Road, Capitola, California.

b. The purpose ofour investigation is to provide preliminary geotechnical design parameters and recommendations for development of the site. Conclusions and recommendations related to site grading, foundations, and associated improvements are presented herein.

c. Final grading, structural: and foundation plans are unavailable as of the date of this report. The intention, as we understand it, is to use the findings and recommendations of this report as a basis for developing such plans.

Environmental Review Inital Study
ATTACHMENT 6, 7 of 17
APPLICATION -0269

1.2 Prouosed Development

a. Based on our discussions with you, it is our understanding that the subject project consists ofthe construction of a new 13 unit subdivision on a lot in a developed area. The lot is generally flat to gently sloping. Therefore it is our understanding that slope stability analysis will not be required on this project. The site is currently occupied by the remnants of Antonelli's Begonia Gardens. It is our understanding that all existing improvements are to be demolished in connection with the construction of this project.

b. Anticipated construction consists of wood frame walls, wood roofjoists and wood or slab-on-grade floors. Exact wall, column, and foundation loads are unavailable, but are expected to be typical of such construction.

c Also anticipated is the construction ofthe attendant utilities, paved drives and parking areas, as well as landscape and drainage improvements.

1.3 Scope of Services

The scope of services provided during the course of our investigation included:

a. Review of previous geotechnical, geologic, and seismological reports and maps pertinent to the site.

b. Field exploration consisting of 5 borings drilled to depths of 10± to 40± feet below existing grade

c. Logging and sampling of the borings by our Field Engineer, including the collection of soil samples for laboratory testing.

d. Laboratory testing of soil samples considered representative of subsurface conditions.

e. Geotechnical analyses of field and laboratory data.

f. Preparation of a report (6 copies) presenting our findings, conclusions and recommendations.

1.4 Authorization

This investigation, as outlined in our Proposal dated March 11, 2005, was performed in accordance with your written authorization of March 18, 2005.

2. FIELD EXPLORATION PROGRAM

Details of the field exploration, including the Boring Logs, Figures **A-3** through **A-7,** are presented in Appendix **A**

3 LABORATORY TESTING PROGRAM

Laboratory testing was performed on relatively undisturbed and bulk samples considered representative of subsurface conditions. Details of the laboratory testing program are presented in Appendix B. Test results are presented on the Boring Logs, Figures **A-3** through **A-7.** and in Appendix B.

Environmental Review Inital Study
ATTACHMENT 6, 3 of 17
APPLICATION 05-0269

4. SITE DESCRIPTION

4 1 Location

The project site is located at Maciel Avenue and Byer Road, Capitola, California. The site location is shown on the Location Map, Figure 1

4.2 Surface Conditions

a The subject property consists of a relatively flat building pad in a developed residential neighborhood. The site is currently occupied by the remnants of Antonelli's Begonia Gardens. It is our understanding that all existing improvements are *to* be demolished in connection with the construction of this project.

b The surface soils are composed of black to dark brown silty clayey sand. The soil was very loose, saturated and slightly plastic at the time of our field exploration.

4.3 Subsurface Conditions

a. The results of our field exploration indicate that the subsurface soils present on the site are relatively consistent.

b. The near surface black to dark brown silty clayey sand extends to a depth of approximately **2** ± to 3 ± feet. This material is generally very loose, saturated and slightly plastic. Underlying the near surface soils, from a depth of approximately 2 ± to 3 ± feet to a depth of 3 ± to 4.5 ± feet, an orange brown sandy clay was encountered. This material, was generally saturated, plastic, and soft. The results of our laboratory testing indicate that this material is of low expansivity and highly compressible under the loads anticipated for this project. Underlying this material, from a depth of approximately 3 ± to 4.5 ± feet to the full explored depth of 40± feet the material encountered consisted of cemented silty clayey sands and sandy clays interspersed with layers of cemented sand with traces of silt and clay. This material was generally dry to moist, nonplastic to slightly plastic and medium to very dense.

c. Regional groundwater was not encountered during our field exploration. However, shallow groundwater was encountered perched on the orange brown cemented clayey sand layer at an average depth of approximately 3.5 feet during the course of our field investigation.

d. Complete soil profiles are presented on the Boring Logs, Appendix **A,** Figures **A-3** through A-7. The boring locations are shown on the Boring Location Plan, Figure A-1

5. GEOTECHNICAL HAZARDS

a. Geotechnical hazards to man made structures at this site include ground shaking, ground rupture, landsliding, liquefaction, lateral spreading, and differential compaction.

b Ground shaking caused by earthquakes is a complex phenomenon Structural damage can result from the transmission of earthquake vibrations from the ground into the structure. The intensity of shaking depends on, amonyst other items, the proximity of the site to the focal point of the earthquake. Structures built on unconsolidated material generally experience movements of higher amplitude and lower acceleration. In the event of an earthquake, frame and semi-rigid structures with proper seismic parameters incorporated into their design and construction should display only moderate damage The structure must be designed in accordancewith the applicable seismic design parameters outlined in the 1997 Uniform Building Code. See Table I.

Table I. Seismic Design Parameters

		Seismic	Coefficient	Near Source	Factor	
Soil Profile Type	Seismic Zone Z	C_a	C_v	N_a	N_v	Seismic Source Type
S_C	**0.4**	0.40 N_a	*0.56* N_v	1.0	1.1	A / B

c. Liquefaction, lateral spreading and differential compaction tend to occur in loose, unconsolidated, noncohesive soils with shallow groundwater. The presence of relatively dense soils at this site and the lack of shallow groundwater suggest that the potential for these hazards to occur within the limits of this site and to cause damage to the structure is low.

d The subject site is generally flat. Landsliding is therefore not expected to present a threat to the proposed development

Environmental Review Inital Study
ATTACHMENT 6, 5 of 17
APPLICATION 05-0269

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 General

a. Based on the results of our investigation, it is our opinion that from the geotechnical standpoint, the subject site will be suitable for the proposed development provided the recommendations presented herein are implemented during grading and construction.

b. If these recommendations are implemented in the design and construction, the danger to life and property is considered an ordinary risk (General Plan).

c. No active faults are known to exist through the site although published maps indicate the presence of faults nearby.

d. It is our opinion that the site will be suitable for the support of the proposed residences on foundation systems composed of either drilled, cast-in-place concrete shafts and grade beams or conventional shallow spread and pad footings.

e. Drilled cast-in-place concrete shafts should be embedded a minimum of 8 feet below the bottom of the grade beams or 4 feet into the dense cemented silty sandy clay whichever is greater. See Subsection 6.3.2 for shaft recommendations.

f. The results of our laboratory testing indicate that the expansive potential of the near surface silty clayey sand should be considered low. See Subsection 6.2**3** for further recommendations on subgrade preparation.

g. Consolidation test results indicate that the saturated, near surface soils that underlie the site are highly compressible in their in situ condition,

h. It is our understanding that as part of the remediation program proposed to address environmental issues on the subject site, the upper 2 to 3 feet of material across the site is to be removed and disposed of off site. Due to the compressible nature of the saturated clayey sands and sandy clays underlying the site, we recommend that any of these materials that remain in place after the removals associated with the environmental remediation are complete, be removed from beneath shallow foundation elements, slabs-on-grade, pavements, and structural fills. The material removed should then be replaced with imported engineered fill as recommended in Subsection 6.2.3.. The fill should be placed and compacted per the recommendations presented in Subsection 6.2.4..

i. Regional groundwater was not encountered during our field exploration. However, shallow groundwater was encountered perched on the cemented grey brown sandy clay layer at an average depth of approximately 3.5 feet. Wet excavations should be anticipated, especially if grading is performed during the rainy season. Stabilization fabric andior subdrains may be required.

j The results ofour laboratory testing indicate that the soluble sulfate content ofthe on-site soils likely to come into contact with concrete is below the 0.2% generally considered to constitute an adverse sulfate condition. Type II cement is therefore considered adequate for use in concrete in contact with the on-site soils.

k. We consider that the anticipated grading will not adversely affect, nor be adversely affected by, adjoining property, with due precautions being taken

l. It is assumed that final grades will not vary more than 4± feet from current grades. Significant variations will require that these recommendations be reviewed.

m. The final Grading Plans, Foundation Plans and design loads should be reviewed by this office during their preparation, prior to contract bidding.

n. The design recommendations of this report must be reviewed during the grading phase when subsurface conditions in the excavations become exposed.

o. Field observation and testing must be provided by a representative of Tharp &Associates, Inc. to enable them to form an opinion regarding the adequacy ofthe site preparation, the adequacy of fill materials, and the extent to which the earthwork is performed in accordance with the geotechnical conditions present, the requirements ofthe regulating agencies, the project specifications and the recommendations presented in this report. Any earthwork performed in connection with the subject project without the full knowledge of, and not under the direct observation of Tharp & Associates, Inc., the Geotechnical Consultant, will render the recommendations of this report invalid.

p. The Geotechnical Consultant should be notified at least five (5) working days prior to any site clearing or other earthwork operations on the subject project in order to observe the stripping and disposal of unsuitable materials and to ensure coordination with the grading contractor. During this period, a preconstruction conference should be held on the site to discuss project specifications, observation/testing requirements and responsibilities, and scheduling. This conference should include at least the Grading Contractor, the Architect, and the Geotechnical Consultant.

Environmental Review Inital Study
ATTACHMENT 6, 7 of 17
APPLICATION 05-0269

6.2 Grading

6.2.1 General

All grading and earthwork should be performed in accordance with the recommendations presented herein and the requirements of the regulating agencies.

6.2.2 Site Clearing

a. Prior to grading. the areas to be developed for structures, pavements and other improvements, should be stripped of any vegetation and cleared of any surface or subsurface obstructions; including any existing foundations, utility lines, basements, septic tanks, pavements, stockpiled fills, and miscellaneous debris.

b. All pipelines encountered during grading should be relocated as necessary to be completely removed from construction areas or be capped and plugged according to applicable code requirements.

c. Any wells encountered shall be capped in accordance with Santa **Cruz** County Health Department requirements. The strength of the cap shall be at least equal to the adjacent soil and shall not be located within 5 feet of any structural element.

d. Surface vegetation and organically contaminated topsoil shouid be removed from areas to be graded. The required depth of stripping will vary with the time of year the work is done and must be observed by the Geotechnical Consultant.

e. Holes resulting from the removal of buried obstructions that extend below finished site grades should be backfilled with compacted engineered fill.

6.2.3 Preparation of On-Site soils

a. The results of our field investigation and laboratory testing indicate that the near-surface soils on the subject site are highly compressible in their in situ condition. In order to obtain uniform compression characteristics and to obviate any potential for differential settlements, site preparation, consisting of over excavation and recompaction of the near-surface soils will be required prior to placement of slabs-on-grade, pavements, or new fill. The depths of over excavation and recompaction recommended herein are subject to review during grading.

b. Beneath Structures Supported on Drilled. Cast-In-Place. Concrete Shafts & Grade Beams:

With drilled cast-in-place concrete shafts and grade beams, no over excavation and recompaction of the native subgrade beneath the structure is required, other than beneath slabs-on-grade and that required to recompact material disturbed during construction.

c. Beneath Structures Supported on Conventional Shallow Spread & Pad Foundations:

It is our understanding that as part of the remediation program proposed to address environmental issues on the subject site, the upper 2 to 3 feet of material across the site is to be removed and disposed of off site. Due to the compressible nature of the saturated clayey sands and sandy clays underlying the site, if shallow foundation systems are used, we recommend that any of these materials that remain in place after the removals associated with the environmental remediation are complete, be removed from beneath the residences and replaced with imported engineered fill placed and compacted per the recommendations presented in Subsection 6.2.4.. This zone of removal and replacement should extend to a depth where the dense cemented sandy clay is encountered and shall extend a minimum of 5 feet laterally beyond the building footprint.

d. Beneath Concrete Slabs-on-wade. Pavements or Structural Fills:

We further recommend that the near surface, compressible, saturated, clayey sands and sandy clays that remain in place after the removals associated with the environmental remediation are complete, be removed from beneath concrete slabs-on-grade, pavements, and structural fills. These materials should be replaced with imported

engineered fill placed and compacted per the recommendations provided in Subsection 6.2.4. This zone of removal and replacement should extend to a depth where the dense cemented clayey sand is encountered and shall extend a minimum of 2 feet laterally beyond the slab or pavement footprint.

e. Due to the fact that the'depth of reworking will be dependent on the slab and pavement grades, etc., our office should be provided with a copy of the final, approved plans prior to the commencement of earthwork operations.

f The depths of reworking required are subject to review by the Geotechnical Consultant during grading when subsurface conditions become exposed.

g. Settlements may need to be evaluated should the planned grades result in the ground surface being raised 4± or more feet above the existing grades. Should this occur, some additional reworking of existing materials may be required.

h. he depths of over excavation should be reviewed by the Geotechnical Consultant during the actual construction. Any surface or subsurface obstruction, or questionable material encountered during grading, should be brought immediately to the attention of the Geotechnical Consultant for proper processing as required.

6.2.4 Fill Placement and Compaction

a. Any fill or backfill required should be placed in accordance with the recommendations presented below.

b. With the exception of the upper 6 inches of subgrade in pavement and driveway areas, material *to* be compacted or reworked should be moisture-conditioned or dried to achieve near-optimum conditions, and compacted to achieve a minimum relative compaction of 90%. The upper 6 inches of subgrade in pavement and drive areas and all aggregate base and subbase shall be compacted to achieve a minimum relative compaction of 95%. The placement moisture content of imported material should be evaluated prior to grading.

c. The relative compaction and required moisture content shall be based on the maximum dry density and optimum moisture content obtained in accordance with ASTM D-1557.

d. Fill should be compacted by mechanical means in uniform horizontal loose lifts not exceeding 8 inches in thickness. All fill should be compacted with vibratory equipment.

e. Imported fill material should be approved by the Geotechnical Consultant prior to importing. Soils having a significant expansion potential should not be used as imported fill. The Geotechnical Consultant should be notified not less than 5 working days in advance of placing any fill or base course material proposed for import Each proposed source of import material should be sampled, tested and approved by the Geotechnical Consultant prior to delivery of any soils imported for use on the site.

f. All fill should be placed and all grading performed in accordance applicable codes and the requirements of the regulating agency,

6 2.5 Fill Material

a. The on-site, saturated, clayey, near -surface soil is not considered suitable for use as compacted engineered fill beneath structures, slabs, pavements, or backfill behind retaining walls. It may be used as site fill in landscape or other areas to raise site elevations to the desired levels,

b. All soils, both existing on-site and imported, to be used as fill, should contain less than **3%** organics and be free of debris and cobbles over 6 inches in maximum dimension.

6.2.6 Shrinkage and Subsidence

a. Shrinkage due to the removal and recompaction of the existing on-site native soils is estimated to be on the order of 10 percent. Subsidence may be assumed to be ½ to 1 inch.

b. These are preliminary estimates which may vary with depth of removal, stripping loss, and field conditions at the time of grading. Handling losses are not included.

6 2 7 Excavating Conditions

a. We anticipate that excavation of the on-site soils may be accomplished with standard earthmoving and trenching equipment

b. Regional groundwater was not encountered during our field exploration. However, shallow groundwater was encountered perched on the cemented gray brown clayey sand layer at an average depth of approximately *3.5* feet. Wet excavations should be anticipated especially if grading is performed during the rainy season. Stabilization fabric and/or subdrains may be required.

6.2.8 Cut and Fill Slopes

No significant cut or fill slopes are anticipated in connection with the project as currently envisioned. Should project plans change to include construction of cut and / or fill slopes, recommendations related to their construction will be supplied upon request.

6.2.9 Sulfate Content

The results of the soluble sulfate tests indicate that the soluble sulfate content of the on-site soils likely to come into contact with concrete is below the 0.2% generally considered to constitute an adverse sulfate condition, Type II cement is therefore considered adequate for use in concrete in contact with the on-site soils.

6.2.10 Expansive Soils

a The results of our laboratory testing indicate that the expansion potential of the on site orange brown silty and clayey sand should be considered Low.

b. Expansion testing may be required to evaluate the expansivity of material proposed for imported fill.

6.2.11 Utility Trenches

a. Bedding material should consist of sand with SE not less than 30 which may then be jetted.

b. Existing on-site soils may be utilized for trench backfill, provided they are free of organic material and rocks over 6 inches in diameter.

c. If sand *is* used, a **3** foot concrete plug should be placed in each trench where it passes under the exterior footings.

d. Irrigation activities at the site should be controlled and reasonable. Planter areas should not be sited adjacent to walls without implementing approved measures to contain irrigation water and prevent it from seeping into walls and under foundations and slabs-on-grade.

e. The surface soils are classified as highly erodible. Therefore, the finished ground surface should be planted with erosion resistant landscaping and ground cover and continually maintained to minimize surface erosion.

f. Shallow groundwater was encountered perched on the orange brown clayey sand layer at a depth of approximately 3.5 feet during the course of our field investigation. Depending on the depth of the grade beams. foundation subdrains may be required.

6.3 Foundations

6.3.1 General

a It is our opinion that the site will be suitable for the support of the proposed residences on foundation systems composed of either drilled, cast-in-place concrete shafts and grade beams or conventional shallow spread and pad footings Recommendations for both systems are presented below.

b At the time we prepared this report, the grading plans and foundation details had not been finalized.

c. We request an opportunity to review these items during the design stages to determine if supplemental recommendations will be required.

6.3.2 Drilled Cast-In-Place Concrete Shafts

a. To obviate the potential for differential settlement, we recommend a foundation system composed of drilled, cast-in-place concrete shafts and grade beams.

b Drilled cast-in-place concrete shafts should be embedded a minimum of 8 feet below the bottom of the grade beams or 4 feet into the dense cemented silty sandy clay whichever is greater

c The minimum recommended shaft diameter is 18 inches

d The estimated allowable downward and upward axial shaft capacities for 1.5, 2, and 2.5 foot diameter, drilled, cast-in-place, concrete shafts are presented in Figures 2.1 and 2.2. These capacities do not include the weight of the shaft

e The axial capacities above apply to a single shaft, as this is the anticipated configuration. If multiple shafts are used, group efficiencies should be evaluated on the basis of actual structural configurations in order to assess possible reductions in capacity due to group influences.

f In the event that all or part of the shaft is placed in structural fill consisting of imported materials, allowable bearing capacities will be influenced by the type of these materials and should be re-evaluated.

g Active pressures, as shown in Table II, (See Subsection 6.6.1.), from the upper 2 feet of soil against the shaft, acting on a plane which is 1 ½ times the pier diameter may be assumed for design purposes.

h Passivepressures, as shown in Table 11, (See Subsection 6.6.1.) acting over a plane 1 ½ times the shaft diameter, may be assumed **for** design purposes. Neglect passive pressure in the top 2 feet of soil. Passive pressures may be increased by one-third for seismic loading.

ı Shafts should be spaced no closer than 2.5 diameters, with a minimum 3.0 diameters preferred.

J The caissons drilled for the installation of the shafts should be clean, dry and free of debris or loose soil. The caissons should not deviate more than 1% from vertical.

k Due to the loose saturated near surface soils, caving may present a problem during caisson drilling operations. Casing may be necessary during drilling operations.

l If the contractor chooses to use casing, it must be pulled during the concrete pour It must be pulled slowly with a minimum of 4 feet of casing remaining embedded within the concrete at all times,

m For caisson depths in excess of 8 feet, concrete should be placed via a tremie. The end of the tube must remain embedded a minimum of **4** feet into the concrete at all times.

n. All shaft construction must be observed and approved by the Geotechnical Consultant. Any shafts constructed without the full knowledge and continuous observation of Tharp & Associates, Inc. will render the recommendations of this report invalid.

o. The shaft(s) should contain steel reinforcement as determined by the Project Structural Engineer in accordance with applicable UBC or **ACI** Standards.

6.3.3 Conventional Shallow Foundations

a. The proposed residences may be founded on a system composed of conventional, shallow, continuous and pad footings supported on compacted imported engineered fill placed per the recommendations presented in Sections 6.2.3. and 6 2. 4..

b Footing widths should be based on the allowable bearing value but not less than 12 inches for single story structures. The minimum recommended depth of embedment is 24 inches for exterior wall footings. Interior footing depths should be at least 12 inches for 1 *story* and IS inches for *2 story* sections. Should local building codes require deeper embedment of the footings or wider footings, the codes must apply.

c. Footing excavations must be checked by rhe Geotechnical Consultant before steel is placed and concrete is poured to insure bedding into proper material. Excavations should be thoroughly wetted down just prior to pouring concrete.

d. The actual allowable bearing capacity will depend on the import fill selected. For preliminary design purposes, the **estimated** allowable bearing capacity may be determined from the following equation:

$$q_{all} = 1000D + 500B$$

where:

q_{all} – allowable bearing capacity (lb/ft^2)

D – Depth of embedment (ft) measured from the lowest adjacent grade.

B – minimum footing width (ft)

e. The allowable bearing capacity used should not exceed *2500* lbs/ft^2.

f. The allowable bearing capacity values above may be increased by one-third in the case of short duration loads, such as those induced by wind or seismic forces.

g. The allowable bearing capacity values above apply to both square pad footings and shallow strip footings. although they are slightly conservative for the pad footing case.

? h. In computing the pressures transmitted to the soil by the footings, the embedded weight of the footing may be neglected

i. The footings should contain steel reinforcement as determined by the Project Structural Engineer in accordance with applicable UBC or ACI standards.

j. No footing should be placed closer than 8 feet to the top of a fill slope nor 6 feet from the base of a cut slope.

k. In the event that footings are founded in structural fill consisting of imported materials, theallowable bearing capacities will depend on the type of these materials and should be re-evaluated.

l. Embedment depths should not be allowed to be affected adversely, such as through erosion, softening, digging, etc.

m Total and differential settlements under spread and continuous footings are expected to be within tolerable limits.

6.4 Slabs-On-Grade

a. Concrete floor slabs may be founded on compacted engineered fill. The subgrade should be proof-rolled just prior to construction to provide a firm, relatively unyielding surface, especially if the surface has been loosened by the passage of construction traffic.

b. Wheremoisture sensitive floor coverings are anticipated or vapor transmission may be a problem, a 10 mil waterproof membrane should be placed between the granular layer and the floor slab in order to reduce moisture condensation under the floor coverings. Place a 2-inch layer of moist sand on top of the membrane. This will help protect the membrane and will assist in equalizing the curing rate of the concrete.

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c. Requirements for pre-wetting of the subgrade soils prior to the pouring of the slabs will depend on the specific soils and seasonal moisture conditions and will be determined by the Geotechnical Consultant at the time of construction. It is important that the subgrade soils be thoroughly saturated for 24 to 48 hours prior to the time the concrete is poured

d. The subgrade should be presoaked as follows:

With Low Expansivity Soil - 4 percentage points above optimum, or to 120% optimum, whichever is greater; to 1 foot depth.

e. Slab thickness, reinforcement, and doweling should be determined by the Project Structural Engineer, based on the designlive and dead loads, including vehicles.

f. The utilization of post-tensioned concrete slabs may be considered in lieu of conventional concrete slabs. There are inherent advantages with this system, especially the characteristic that the propagation or widening of cracks that may otherwise develop is inhibited. Detailed recommendations, based on . UBC 1997, will be provided if required. Tentative, outline geotechnical recommendations for post tensioned slabs are presented as follows, for purposes of initial planning:

i. Minimum thickness: 6 inches structural/construction considerations would govern.

ii. Substructure: 2 inches sand, over 10-mil plastic sheet, over prepared subgrade.

iii. Minimum embedment of edge beam below lowest adjacent exterior grade: 18 inches.

6 Settlements

If the recommendations presented in this report are implemented, total and differential settlements beneath foundation elements are expected to be within tolerable limits. Vertical movements are not expected to exceed 1 inch. Differential movements are expected to be within the normal range (½ inch) for the anticipated loads and spacings. These preliminary estimates should be reviewed by the Geotechnical Consultant when foundation plans for the proposed structures become available.

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JOB **05030** Capitola Gardens #2
CALCULATED **BY** GHI
SHEET 1 of **15**
DATE 9/06/05 REVISED

STORM DRAINAGE CALCULATIONS ***TRACT NO. 1506*** **A.P.N.029-371-18**

Site Area = 2 43 Acres
Rainfall Intensity = 2.10 in /hr.

Existing Impervious Surfaces

Parking Lot	7,009 Sq. **Ft.**
Pavement	**9,420**
Green Houses (Glass Roofsj	**31,421**
Main Building. (Burned Down)	8,614
TOTAL	**57,264 Sq. Ft.**

Remaining buildings are lath houses or mesh *roofs* (pervious)

Pre-Development Storm Runoff

Q_{10} = (0.90)(2.10)(1.31) + (0.30)(2.10)(1.12)
= **3.18** c.f.s.

With the removal of all existing buildings and the parking **lot** and constructing 13 single-family houses and related Improvements, the proposed impervious surfaces are.

43 houses (2 story) @	1800 Sq. Ft.(Roof)	= 23,400 sq. Ft.
13 driveways @	400	= 5,200
43 patios @	150	= 1,950
13 miscellaneous @	800	= 2,600
Street Improvements	650 L.F. @ 22'	= 14,300
TOTAL		**47,450 Sq. Ft.**

Post-Development Storm Runoff

Q_{10} = (0.90)(2.10)(1.09) + (0.30)(2.10)(1.54)
= 2.90 c.f.s.

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The post-development condition will result in a decrease in runoff of approximately 0.28 c.f.s. Therefore, no on-site detention or retention is required nor is there any adverse affect on the existing down stream drainage system.

The southerly portion of the site drains off to the existing catch basin at the northwest corner of Maciel Avenue and Byer Road. From there the runoff is piped to Rodeo Gulch along Capitola Road.

This system of storm drains was constructed as part of the improvement to Begonia Gardens Subdivision that Ifland Engineers, Inc. designed in 1982. (See the accompanying calculations) The system was designed to take ail the future runoff within the drainage basin. (See accompanying map) [Q = 6.83 c.f.s.]

$Q_{10} = (0.45)(2.10)(7.23) = 6.83$ c.f.s.

The area of the site drainage north to the existing 8" culvert in Maciel avenue and Encina Drive = 0.90 Ac. This area is now mostly covered with green houses with glass roofs. Some pavement exists along Encina Drive.

Roofs	290' x 100 Ft.	=29,000
Pavement	300 L.F. x20' wide	= 6,000 S.F.
TOTAL		35,000 S.F. (0.80 Ac)

As proposed, the tentative map shows 4 houses and the pavement widened to 36 on Encina Drive

House roofs	4@ 2000.	= 8,000 Sq. Ft.
Pavement (added)	16' x 300	= 4,800
Side walk		= 1,200
Driveways	4 @ 500	= 2,000
Patios etc.	4 @ 500	= 2,000
Pavement on Maciel		= 1,000
Sidewalk on Maciel		= 400
TOTAL		19,400Sq. Ft. (0.44 Ac)

The Net result is that there would be a reduction of approximately 0.36 Ac. of impervious surfaces and thus a reduction in storm runoff.

On the north side of Encina Drive there is an existing drainage ditch that collects the runoff from some of the neighborhood north of the subject project site. This ditch is interrupted with various driveway culverts of different sizes and materials. The area is about 0.30 Acres. This ditch turns the corner at Maciel Avenue where the 8" culvert under Encina Drive discharges.

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The balance of the neighborhood north of the [project site consists of about **4.5** acres and is built out in single family residences. These are two private drainage channels of various sizes and shapes that collect runoff along Encina Dr. and pass through the block to Maciel Avenue. Along Maciel Avenue there is a drainage collection system consisting of interconnected catch basins that connect to a manhole and then discharge into Rodeo Gulch by way of **a** 24" R.C.P.

The existing 8 culvert **is** to be replaced with a 12" culvert that would discharge into the existing ditch. The ditch is now silted up and overgrown with weeds due to lack of maintenance. The north end of the ditch near where an 18" R.C.P. culvert begins **is** about *4* wide and **1.5'** deep. The 18' culvert connects **Po** an existing catch basin at the sag in Maciel Avenue where there are two other catch basins, one that picks up runoff through the block from Encinal Drive and the other on the east side of Maciel Avenue. (See attached Maps)

The proposed project contributes only runoff from 0.43 Ac *to* this basin, or

Q_{10} = (0.65)(2.10)(0.43)
= **059 C.F.S**

The proposed 12" culvert would siope at 1.7% with a flow capacity **of** 4.71 C.F.S., which **is** well oversized for the proposed runoff volume. (12" **is** minimum)

The 18" culvert along a portion **of** Maciel Avenue collects about 0.30 acres plus **the** 0.43 AC of the project site for **a** total of 0.73AC. The total runoff would be:

Q_{10} = (0.45)(2.10)(0.73)
= **0.69 C.F.S.**

This 18" culvert slopes at about 5% with **a** capacity of 23.49 C.F.S., well oversized for the incoming runoff

Due to the "Hog-Bog" drainage system in the adjoining neighborhood to the north of the project site, consisting of private ditches and driveway culverts of varying sizes slopes and materials, concrete channels of varying ***sizes*** and slopes plus surface runoff directly to Maciel Avenue, there is no way to analyze the drainage system other than to take the total basin as a whole once it all comes together.

Taking the entire drainage basin that collects at the sag in Maciel Avenue there **is** about 7.6 acres, with a total runoff of:

Q_{10} = (0.45)(2.1)(7.6)
= **7.18 C.F.S**

This total runoff enters the existing manhole on the east side of Maciel Avenue and then discharges into Rodeo Gulch by ***24"*** R.C.P. This pipe **slopes** in excess of 2% and has a capacity of **at** least 32.0 C.F.S., well in excess of **total** runoff

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Conclusion:

Since the proposed project reduces the runoff from the site due Po reduced impervious surfaces, there is no adverse impact on the offsite drainage improvements. The only improvement proposed is to replace the old 8" culvert at Maciel Avenue and Encina Drive and to clean out the siit and weeds in the ditch into which the new 12" culvert discharges.

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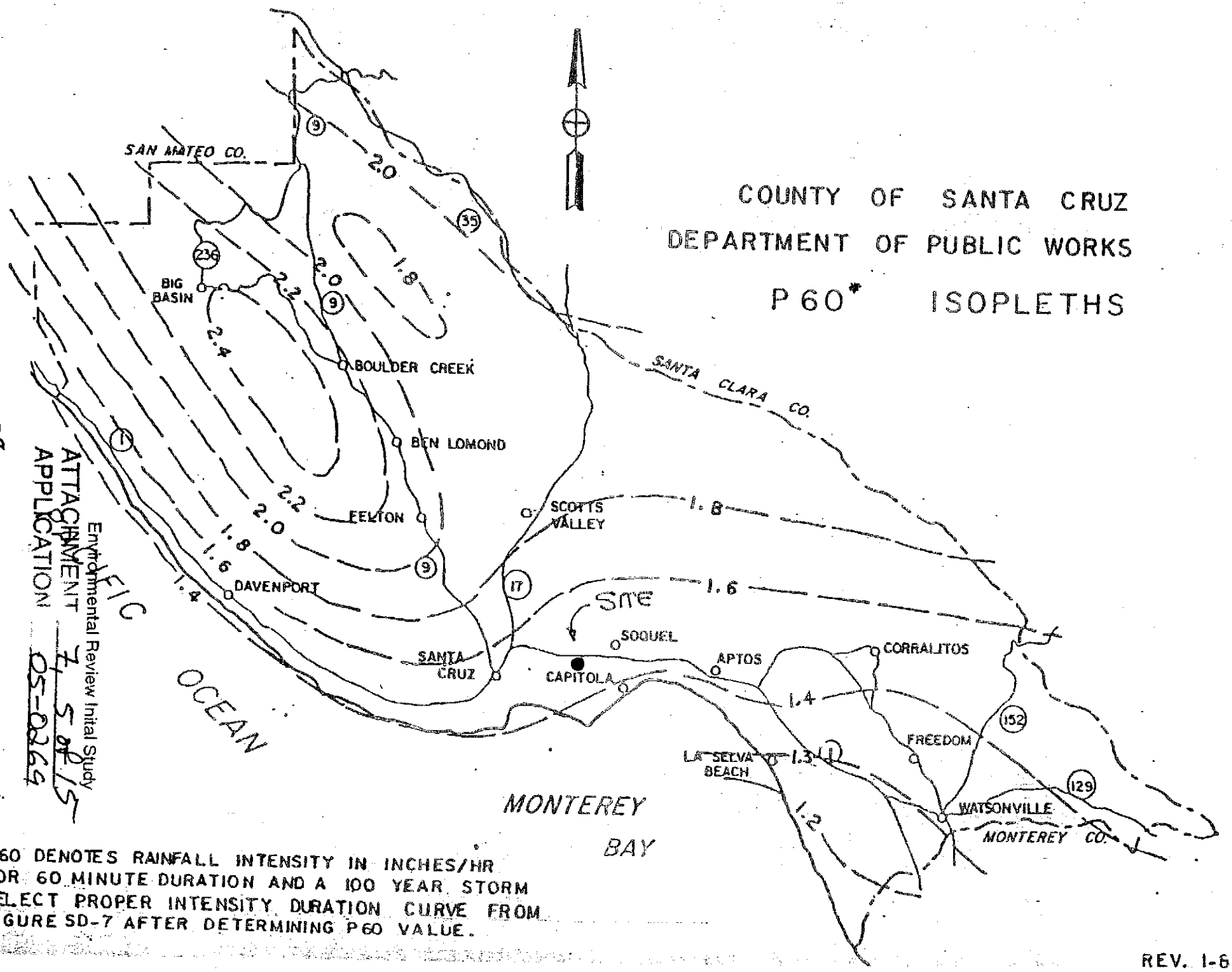

*P60 DENOTES RAINFALL INTENSITY IN INCHES/HR FOR 60 MINUTE DURATION AND A 100 YEAR STORM SELECT PROPER INTENSITY DURATION CURVE FROM FIGURE SD-7 AFTER DETERMINING P60 VALUE.

REV. 1-61

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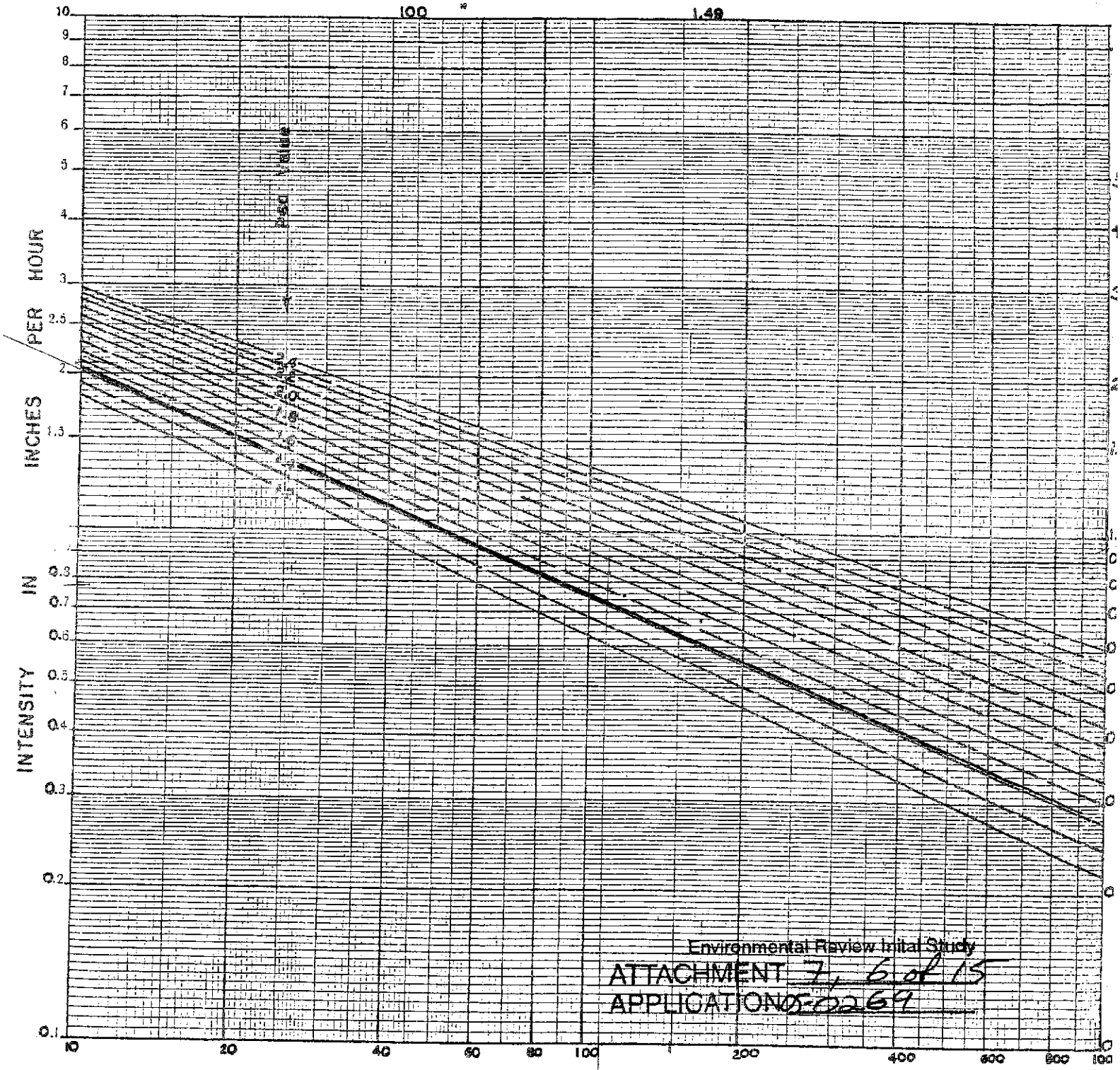
To convert curve intensities to return periods other than 10 years multipy curve intensities by the following factors.

Return Period	Factors
5 YEARS	0.84
15 "	1.09
25 "	1.20
50 "	1.34
100 "	1.49



NOTE : SEE FIGURE 1 FOR P60 VALUES

RAINFALL INTENSITY DURATION CURVES

10 YEAR RETURN PERIOD

FIG. SD-2

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TABLE 5

CIRCULAR PIPE FLOW CAPACITY
Full Flow (cubic feet per second)

Mannings "n"= 0.013

Dia. (in.)	*Conv. Factor	% Slope (feet per 100 feet) 0.02	0.05	0.10	0.20	0.35	0.50	0.75	1.00	1.25	1.50	1.75	2.0	2.5	5.0	10.0	20.
		(c.f.s															
3	0.884	0.012	0.020	0.028	0.040	0.052	0.062	0.077	0.088	0.099	0.11	0.12	0.12	0.14	0.20	0.28	0.40
4	1.903	0.027	0.043	0.060	0.085	0.113	0.135	0.165	0.190	0.213	0.23	0.25	0.27	0.30	0.43	0.60	0.85
5	3.451	0.049	0.077	0.109	0.154	0.204	0.244	0.299	0.345	0.386	0.42	0.46	0.49	0.55	0.77	1.09	1.54
6	5.611	0.079	0.125	0.177	0.251	0.332	0.397	0.486	0.561	0.627	0.69	0.74	0.79	0.89	1.25	1.77	2.51
8	12.084	0.171	0.270	0.382	0.540	0.715	0.854	1.047	1.208	1.351	1.48	1.60	1.71	1.91	2.70	3.82	5.40
10	21.91	0.31	0.49	0.69	0.98	1.30	1.55	1.90	2.19	2.45	2.68	2.90	3.10	3.46	4.90	6.93	9.80
12	35.63	0.50	0.80	1.13	1.59	2.11	2.52	3.09	3.56	3.98	4.36	4.71	5.04	5.63	7.97	11.27	15.93
15	64.60	0.91	1.44	2.04	2.89	3.82	4.57	5.59	6.46	7.22	7.91	8.55	9.14	10.21	14.44	20.43	28.89
18	105.04	1.49	2.35	3.32	4.70	6.21	7.43	9.10	10.50	11.74	12.87	13.90	14.86	16.61	23.49	33.22	46.99
21	158.45	2.24	3.54	5.01	7.09	9.37	11.20	13.72	15.85	17.72	19.41	20.96	22.41	25.05	35.43	50.11	70.8
24	226.22	3.20	5.06	7.15	10.12	13.38	16.00	19.59	22.62	25.29	27.71	29.93	31.99	35.77	50.59	71.54	101.17
27	309.70	4.38	6.93	9.79	13.85	18.32	21.90	26.82	30.97	34.63	37.93	40.97	43.80	48.97	69.3	97.9	138.5
30	410.17	5.80	9.17	12.97	18.34	24.27	29.00	35.52	41.02	45.86	50.24	54.26	58.01	64.85	91.7	129.7	183.4
36	666.98	9.43	14.91	21.09	29.83	39.46	47.16	57.76	66.70	74.57	81.69	88.23	94.33	105.46	149.1	210.9	298.3
42	1006.1	14.23	22.50	31.82	44.99	59.5	71.1	87.1	100.6	112.5	123.2	133.1	142.3	159.1	225.0	318.2	449.9
48	1436.4	20.31	32.12	45.42	64.24	85.0	101.6	124.4	143.6	160.6	175.9	190.0	203.1	227.1	321.2	454.2	642.4

* Conveyance Factor = (1.486 x R2/3 x A) / n

TABLE 3-1

TYPE OF AREA	10 - YEAR RUNOFF COEFFICIENTS
Rural, park, forested, agricultural.	.10 - .30
Low residential (Single family dwellings)	.45 - .60
High residential (Multiple family dwellings)	.65 - .75
Business & commercial	.80
Industrial	.70
Impervious	.90

Required Antecedent Moisture Factors for the Rational Method*

Recurrence Interval (years)	Ca
2 to 10	1.0
25	1.1
50	1.2
100	1.25

*APWA Publication "Practices in Detention of Stormwater Runoff."

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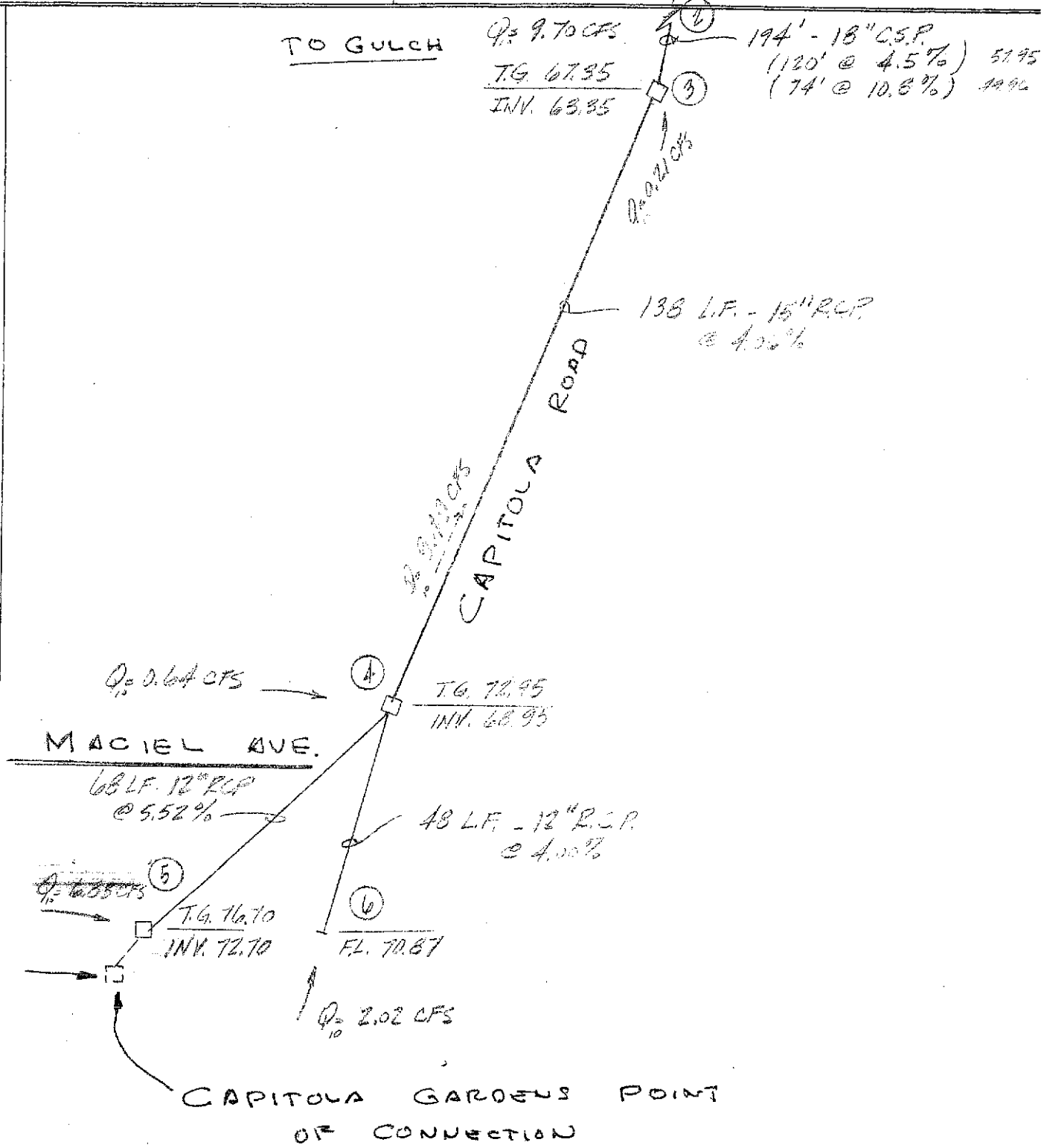
PROJECT BEGONIA GARDENS JOB NO. 8086

STORM DRAIN SYSTEM

DATE AUG. 18, 1988 SHEET NO. 1 OF 3



Environmental Review Initial Study
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PROJECT BEGONIA GARDENS JOB NO. 6086
STORM DRAIN SYSTEM
DATE AUG. 18 1983 SHEET NO. 2 OF 3

OFF SITE DRAINAGE

GUTTER DEPTHS

AREA (1) - A = 600 x 25 = 15,000 SF = 0.34 Ac
$C_{10} = 0.9$ $C_{100} = 0.95$
$I_{10} = 2.1"$ $I_{100} = 1.44 \times 2.1 = 3.13$

$Q_{10} = (0.9)(2.1)(0.34) = 0.64$ CFS — S = 1.9% d = 2.5" ± W = 2.5' ok

$Q_{100} = (0.95)(3.13)(0.34) = 1.06$ CFS — S = 1.9% d = 2.8" ± W = 6' ± ok

AREA (2) - A = 5.34 Ac - .34 = 5.00 Ac

$Q_{10} = (0.65)(2.1)(5.0) = 6.83$ CFS — S = 1.9% d = 4 3/4" W = 14' ± NG

$Q_{100} = (0.94)(3.13)(5.0) = 14.70$ CFS — S = 1.9% d = 8" ± 5 1/2" ± W = 16' ± W = 10' ± NG

AREA (3) A = 1.48 Ac

$Q_{10} = (0.65)(2.1)(1.48) = 2.02$ CFS — S = 4% d = 3" W = 7' ± ok

$Q_{100} = (0.94)(3.13)(1.48) = 4.35$ CFS — S = 4% d = 8 3/4" W = 9.75' ± ok

AREA (4) - CAPITOLA END - A = .11 Ac

$Q_{10} = (0.9)(2.1)(0.11) = 0.21$ CFS — o/c

$Q_{100} = (0.95)(3.13)(0.11) = 0.33$ CFS — ok

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PROJECT BEGONIA GARDENS JOB NO. 8086

STORM DRAIN SYSTEM

DATE AUG. 18, 1983 SHEET NO. 3 OF 3

(1)-(2) Q_{10} = 9.70 CFS TRY 18" CSP n = .024
S = .108 $d^{8/3}$ = 2.95

K' = (9.7)(.024)/(2.95)(.108)$^{1/2}$ = .240 D/d = 0.51

A = .403(1.5)^2 = .91 V = 9.7/.91 = 10.7 f/s h_j = 1.1V^2/2g
h_j = 1.96'

(2)-(3) Q_{10} = 9.70 CFS TRY 18" CSP n = .024
S = .045 $d^{8/3}$ = 2.95

K' = (9.7)(.024)/2.95(.045)$^{1/2}$ = .372 D/d = 0.65

A = .569(1.5)^2 = 1.28 V = 9.7/1.28 = 7.6'/sec h_j = .99'

(3)-(4) Q_{10} = 9.49 CFS TRY 15" RCP n = .015
S = .040 $d^{8/3}$ = 1.81

K' = (9.49)(.015)/(1.81)(.040)$^{1/2}$ = .390 D/d = .70

A = .597(1.25)^2 = .92 V = 9.49/.92 = 10.3'/sec h_j = 1.61'

(4)-(5) Q_{10} = 6.83 CFS TRY 12" RCP n = .015
S = .0552 $d^{8/3}$ = 1.0

K' = (6.83)(.015)/1.0(.0552)$^{1/2}$ = .436 D/d = 0.77

A = .649(1)^2 = .649 V = 6.83/.649 = 10.5'/sec
h_j = 1.88'

(4)-(6) Q_{10} = 2.02 CFS TRY 12" RCP n = .015
S = .04 $d^{8/3}$ = 1.0

K' = (2.02)(.015)/1.0(.04)$^{1/2}$ = .152 D/d = .395

A = .29(1)^2 = .29 V = 2.02/.29 = 7.0'/sec
h_j = .84'

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JOB 05030 Capitola Gardens #2
CALCULATED BY GHI
SHEET 12 of 15
DATE 9/06/05 REVISED

Gutter Flow Capacity North Side Byer Road in Front of Lots 1, 2 and 3

Drainage Area: North half of Eyer Road from Will Way to curb return onto Maciel and East half of Will Way from Encina Drive to Eyer road including lots 2, 3, 4, 5, 6, and ½ of lots 1 and 7. Total area 1.25 Acres

Street	0.37Ac @ C	= 0.90
Lots	0.38 Ac. @ C	= *0.50*

Q_{10} = (0.90)(2.10)(0.37) + (0.50)(2.1)(0.88)
= 1.62 c.f.s.

Gutter slope is 0.30% and is adequate **for** the total accumulated **flow** of 1.62 c **f s** (See Attached Table)

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ATTACHMENT 7, 12 of 15
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Concrete Curb and Gutter, Asphalt Surface
Table of Gutter Flow

Slope %	W = 32'		W = 36'	
	V	Q	V	Q
0.1	0.83	1.34	0.85	1.33
0.2	1.18	1.91	1.20	1.88
0.4	1.67	2.70	1.70	2.67
0.6	2.04	3.30	2.08	3.26
0 8	2.35	3.81	2.40	3.77
1.0	2.63	4.26	2.68	4.21
1.5	3.22	5.22	3.29	5.17
2	3.72	6.03	3.79	5.95
3	4.56	7.39	4.65	7.30
4	5.26	8.52	5.37	8.43
5	5.88	9.53	6.00	9.42
6	6.44	10.43	6.57	10.31
7	6.96	11.28	7.10	41.15
8	7.44	12.05	7.59	11.92
9	7.89	12.78	8.05	12.64
10	8.32	13.48	8.49	13.33
Width between curbs		32'	36	
Depth wat			.40	
Dist. to edge of water from curb		9.47	8.84	
Water area		1.62	1.57	
P		9.82	9.19	
R		,165	.170	
R 2/3		,301	.307	
n		.017	.017	(87.41)

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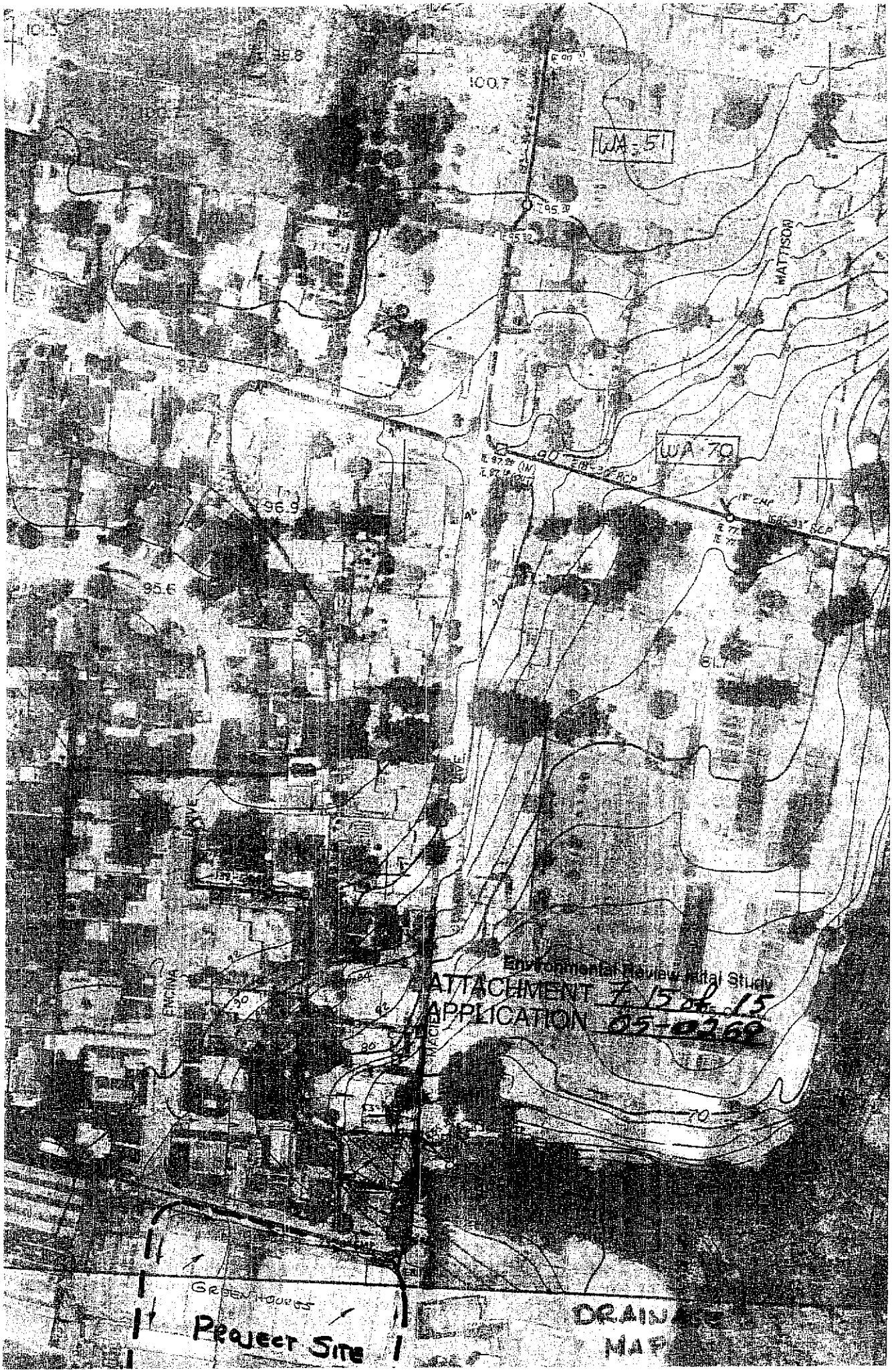
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Environmental Review Initial Study
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Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville. CA 95076
(831)722-3580 (831)662-3100
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April 4, 2005

County of Santa Cruz Health Services Agency
- Environmental Health
Attention: Rolando Charles, R.E.H.S.
701 Ocean Street, Room 312
Santa Cruz. California 95060

Hulter Construction, Inc.
Attention: Basil Steiger/Bob Hulter
444 Scotts Valley Drive
Suite 78
Scotts Valley, California 95066

Subject: **SOIL** SAMPLING REPORT
Testing to Confirm Environmental Conditions Prior to Property Development

Site Location: Antonelli's Begonia Gardens
2545 Capitola Road, Santa Cruz (APN# 029-111-59)

10 EXECUTIVE SUMMARY

This letter report presents the results of a shallow soil investigation completed to determine whether long term commercial nursery operations at the subject site have impacted the surface soils with the pesticide chemicals of concern. Specifically, surface and shallow soil samples were collected and tested for persistent organochlorine pesticide compounds, including DDT and its breakdown metabolites and dieldrin. Sampling and testing of the 2.4-acre subject site was conducted in accordance with a regulatory-approved workplan'. The completed scope followed the design of regulatory-approved site characterization work on adjoining nursery lands prior to residential development (1999).

1.1 Summary of Field **Operations:** The current sampling and testing plan was designed to determine the presence of potential pesticide hot spots as well as the vertical extent of any elevated detections. Soil samples were collected from three depths (3-6 inches, 9-12 inches, and 15-18 inches) on **a** grid containing twenty-five sample locations (50-foot centers). Initially, all twenty-five shallow surface samples (3-6 inch samples) were analyzed as a worst-case basis to determine whether persistent pesticides by EPA Method 8081A were present above established risk-based concentrations (Preliminary Remediation Goals, PRG's). The PRG's have been established by the California Department of Toxic Substances Control (DTSC) to used as initial screening levels as they are considered to be protective for humans (including sensitive groups), over a lifetime[2]. Results are presented on Table 1.

Laboratory results showed that nine of the twenty-five surface samples contained DDT or Dieldrin at concentrations exceeding PRGs for residential sites. Specifically:

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[1]: Weber, Hayes and Associates workplan: ***Workplan*** to ***Confirm Shallow Soil Conditions Prior to*** a Property ***Sale,*** 2525 ***Capitola Road, Santa Cruz,*** dated Jan-5, 200.
County **of** Santa Cruz Health Services Agency, ***Workplan Approval,*** dated Jan-21.2004.

[2]: Region 9 EPA guidance document: ***Preliminary Remediation Goals (PRGs),*** 2002. http://www.epa.gov/Region9/waste/sfund/prg/index.htm). ***Note:*** A Copy ***of*** the PRG table is included in Appendix C along **with** additional toxicological information on DDT.

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- Only two locations (S-18, and S-25) contained cumulative DDT (DDT, DDE, and DDD) at concentrations exceeding: 1) PRG screening level of **1.7** ppm, and **2)** the SC-HSA-established cleanup level of 1 part per million (ppm, or mgkg). DDT ***at*** these two locations was detected at **5.39** and **3.46** ppm, respectively (see Figure **3).**

- Eight locations contained Dieldrin at concentrations exceeding **the** PRG screening level of **0.03** ppm (S-1, S-8, **S-11, S-17,** S-18, **S-19, S-23,** and **S-24, *see*** Figure **3).** Dieldrin concentrations ranged from **0.032** to 0.18 ppm.

In accordance with the workplan, the next deeper sample (the **9-12** inch sample) from **these** quadrants (ie. those quadrants containing either elevated DDT or Dieldrin) **was** tested to determine the vertical extent of the persistent pesticide compound. Table 1 and Figure **3** present the results of this deeper sample testing, which show:

- Neither of the two deeper samples tested for DDT exceeded PRG **(1.7** ppm) or the SC-HSA-established cleanup level **(1** pprn).

- Only two of the nine deeper samples (S-1, and **S-23)** contained Dieldrin at concentrations at or exceeding the **0.03** ppm PRG for residential sites.

Again, io accordance with the workplan, the next deeper sample (the **15-18** inch sample) collected from the two quadrants containing elevated Dieldrin concentrations was tested to profile the vertical extent of the elevated concentrations. The test results indicate:

- Only the deeper soil sample from one of the two tested quadrants contained Dieldrin at a concentration that exceeded the **0.03** ppm PRG for residential sites (S-1). This sample location is where a stockpile of relatively low-level DDT and Dieldrin-impacted soils was buried under asphalt in 1999. A regulatory-approved grading and soil's relocation plan included placing **the** soil at this location in **a** 6-foot deep pit encapsulated with asphalt[3].

- Subsequent testing of three deeper soil samples collected from the S-1 boring location **(21-24** inches, **27-30** inches, and **33-36** inches) detected elevated Dieldrin concentrations exceeding the PRG of **0.30** ppm. Concentrations in these three samples ranged from **0.14** to 0.20 ppm **(see** Table 1 and Figure 1).

1.2 Limited Remedial **Excavation** (Grading) **and Disposal** Plan: Figure 3 presents **the** discrete soil sample results obtained from the twenty-five quadrants. **As** noted above, Concentrations of low-level DDT and Dieldrin exceeding PRG'S for residential land **use** were detected in nine of these quadrants. We have obtained disposal acceptance from a local Class III landfill for these relatively low-level concentrations and we propose to transport these **soils** to this Class III landfill for appropriate disposal (see acceptance email, Appendix **B).**

[3]: John Minney Consulting Engineer report: ***Revised Grading Plan, Capitola Gardens Subdivision,*** dated March **16,1999.** Note: copy of **text** and site **mitigation** pian map included in Appendix **A.**

Figure 3 presents approximate quadrant dimensions and volumes to be hauled. We estimate that a total of approximately 1,290 cubic yards (yd^3) of soil will need to be removed in order to obtain residential PRG concentrations for the shallow soils. The average concentrations of the 1,290 yd^3 of soil hauled is calculated to be 0.80 for DDT and 0.10 for Dieldrin. A breakdown of soil volumes we estimate will be removed from by quadrant follows:

- Area 1 (Quadrants S-18, -19, S-23, S-24, and S-25): This area contains an approximate footprint of 21,500 ff. Soils in this area will be scraped to a depth of 7.5 inches which will generate an estimated volume of 500 yd^3.
- Area 2 (Quadrant S17): This area contains an approximate footprint of 4,000 ff and soils in this area will be scraped to a depth of 7.5 inches which will generate an estimated volume of 95 yd^3.
- Area 3 (Quadrants S-8, and S-11): This area contains an approximate footprint of 6,200 ft^2. Soils will be scraped to a depth of 7.5 inches which will generate an estimated volume of 145 yd^3.
- &&(Quadrant S-I): This is the location where relatively low-level DDT and Dieldrin-impacted soils were buried to a depth of 6 feet and encapsulated with asphalt. In order to be assured of a safe, health-based conditions, we propose to excavate out to a depth of 3 feet at this location and replace with a cap of clean, imported fill soils. The approximate footprint is 4,800 ft^2 and soils in this area will be removed to a depth of 3 feet which will generate an estimated volume of 550 yd^3.

We request approval of this limited remedial excavation plan to we can grade the site for development in late April 2005 and prepare for site development in eariy summer.

2.0 PURPOSE AND SCOPE

Weber, Hayes and Associates were contracted by Hulter Construction, Inc. to complete a workplan and soil assessment of shallow soils at the site to determine whether long term commercial nursery operations at the subject site have impacted the surface soils with the pesticide chemicals of concern. Completed work tasks included:

- Coordinating investigation work with SC-HSA staff including confirming workplan acceptance and coordinating field inspections.
- Clearance of underground utilities for shallow auger sampling (USA, property owner) and the collection of surface and shallow soil samples. Field logs and a description of field methodology is included in Appendix B.
- Submitting samples for persistent organochlorine pesticide compound testing by EPA screen method # 8080A, which included Dieldrin, DDT and its breakdown metabolites. The laboratory Certified Analytical Report for samples collected on January 20 and February 16,

2005 are included **as** Appendix A.

- Completing this report assessing subsurface conditions **beneath** the site based on the collected data. This report includes:

  - An overview of known site conditions including a brief description *of* the subject parcel layout, an overview of shallow hydrogeology, a written summary of previous **soil** sampling on adjoining parcels, and fate and transport information on Dieldrin and DDT.

  - Tabulation and plan view presentation of collected data (Table 1, Figure **3)**

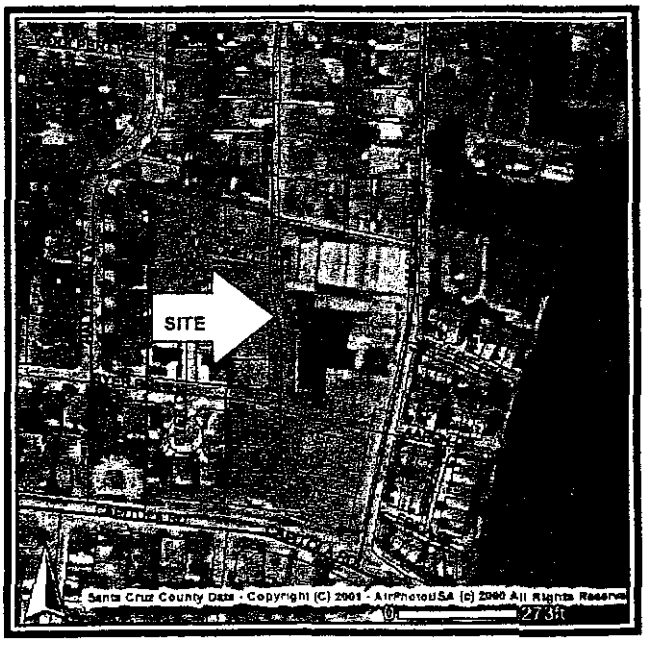
  - A grading plan that describing **soil** handling and specific volumes to **be** removed,

  - Additional support documentation is provided including: 1) reference materials on the chemicals *of* concern (Appendix C: PRG table, Toxicological Fact Sheets), and 2) previous report results of adjoining parcel testing and grading plan (Appendix D).

3.0 BACKGROUND

This section provides an overview of known **site conditions** including a brief description **of** the subject parcel layout, an overview of shallow **hydrogeology,** information on DDT and Dieldrin including data on health-based screening levels, and a summary *of* previously mentioned soil sampling on adjoining parcels.

3.1 Site Description: The 2.4-acre, fiat-tying commercial parcel has an irregular-rectangular shape (approximately 400'x 240'), and is located in the eastern side of the City of Santa Cruz at the northwest corner of Maciel and Byer Roads. The site is the final commercial lot remaining from a much larger set of parcels that have recently been developed as residential housing. The physical address of the subject site is 2545 Capitola Road even though it does not contain frontage along Capitola Road (this is a relic of long term business operations at the larger greenhouse facility which extended to Capitola Road, see zoning aerial photo - right, and Location Map, Figure 1).

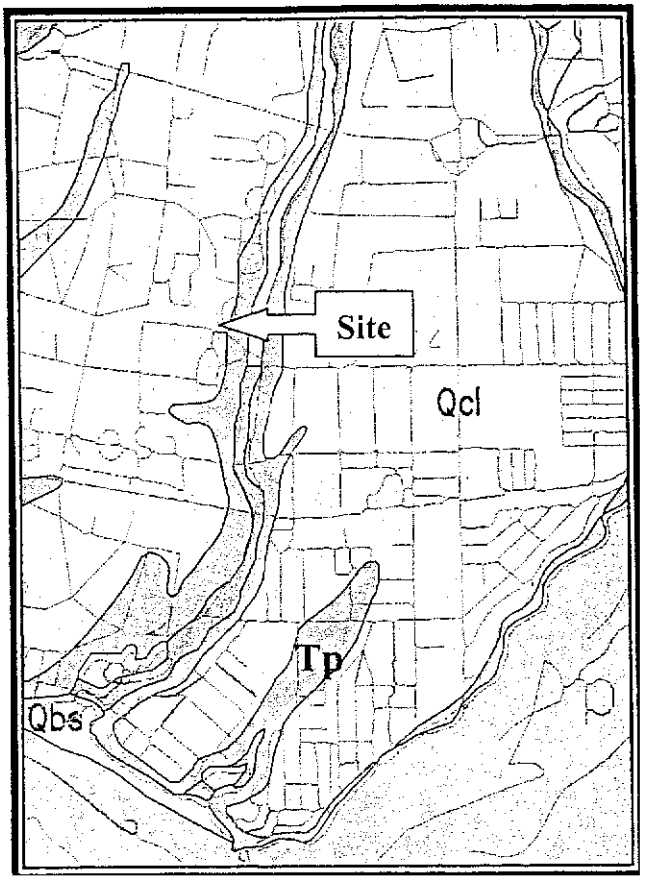


The commercial property is surrounded on all sides by residential housing developments and has street frontage access on all four sides: Maciel Road to the east, Eyer Road to the south, Willa Way to the west, and Encina Drive to the north (see Vicinity and Site Map, Figure *2).* The site currently contains a number of greenhouse

structures and retail sales area associated with the Antonelli Brothers Begonia Gardens, an operating nursery which operated at the subject site and adjoining lands for decades. Current development plans for the site include conversion of the property to residential housing and the sampling and testing documented in this report were completed to confirm that long-term commercial land use at the site (nursery) has not impacted the shallow soils.

2.2 Local Topographic and Hydrogeologic Setting: The topographic elevation at the flat-lying property is approximately 10 feet above Mean Sea Level (MSL) and the southward-flowing Rodeo Gulch Creek is located approximately 500 feet east of the site (see Figure 1).

The surface materials in the vicinity *of* the subject site are mapped as the "lowest emergent coastal terrace deposits" which were deposited in near shore, high-energy marine environment (Qcl, see geologic map, right). These deposits are reported as up to **40** feet thick and consist of semi-consolidated, generally well-sorted sand with a few thin, relatively continuous layers of gravel. The terrace deposits overlie the Purisima Formation, a very thickly bedded siltstone and sandstone bedrock. The marine terrace deposits have locally been incised by the southward trending Rodeo Gulch Creek drainage to the east. Shallow groundwater is assumed to flow to the southeast, toward this drainage.



Site Geology
Qcl: Coastal Terrace Deposits
Tp: Purisima Formation Mudstone

Geotechnical drilling **was** conducted at adjacent parcels in **1989** (three borings to **20')** and **1998 (six** brings to **11.5-21.5 feet)**[4]. Shallow soils beneath the site appeared relatively continuous and typical of terrace deposits (shallow clayey silt underlain **by** sandy silt to **silty** sand), No groundwater was encountered in nine borings.

An &inch diameter, water production well is located on the **subject** site and supplies commercial water for the site nursery (see Figure *2).* The well was drilled in February **2000** to replace a well destroyed as part of adjoining parcel development. The drillers log shows the well was constructed to a depth of **205** feet and has a cement seal from ground surface to ***55*** feet. The

[4]. Don Tarp & Associates report: Geotechnical *Investigation Design & Feasibility, Proposed Subdivision at 2431 Capitola Road,* dated March 1998.
Reynolds Associates report: ***Geotechnical Investigation for Lands*** of Antonelli *Brothers (2545 Capitola* Road); dated September **1989.**

log indicates sands were encountered from ground surface to a depth of 205 feet and groundwater stabilized at an elevation of 40 feet below ground surface.

3.3 Previous Environmental **Assessment Work:** Adjoining lands which were previously part of the Antonelli Begonia Gardens parcel were tested in 1992 as part of soil screening for earlier residential development. The results indicated that surface soil (0-6 inches) contained elevated concentrations of DDT and its metabolites DDD and DDE[5]. No Dieldrin was detected in any of the samples (detection limit at 0.016 mg/kg). A regulatory-approved grading and soils relocation plan was developed to scrape off the surface soils containing elevated DDT concentrations and relocate them to a 6-foot deep pit encapsulated with asphalt (soils were used as parking lot subgrade in the vicinity of current sample S-1)[6]. Subsequent testing which included 34 confirmation samples obtained following scraping off 6-inches of surface soils, showed the DDD pesticide concentrations were reduced to acceptable concentrations. Dieldrin was detected in 14 of 34 samples at concentrations ranging from 0.062 to 0.21 (detection limit at 0.05 mg/kg). In addition, the stockpile of approximately 1,815 yd^3 of surface soils generated from the grading project was tested and shown to contain non-hazardous concentrations of DDT and its metabolites. The stockpile contained detections of Dieldrin in 19 of 28 discrete samples at concentrations ranging from 0.05 to 0.34 (detection limit at 0.05 mgkg). *As* per the approved workplan, the soil stockpile was subsequently relocated onsite by placing the soils in an excavated pit and covered with asphalt for use as a parking lot. County of Santa Cruz Health Services closure of this work was granted in September 1999[8].

3.4 Background Information on Residual DDT and Dieldrin[9,10]: *As* described above, development plans for the subject site include proposed conversion from a commercial nursery to residential. During the current testing program, low-level concentrations of two persistent organochlorine pesticide compounds (DDT and Dieldrin) were encountered in the shallow soils at concentrations similar to those previously encountered on adjacent land alreedy converted to

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[5]: Sampson Engineering Associates report: Environmental Site Assessment *for* Antonelli Brothers Begonia Gardens, dated November 24. 1992. Note: copy of tabulated results and sample location map included in Appendix A.

[6]: : John Minney Consulting Engineer report: Revised Grading Plan, Capifola Gardens Subdivision, dated March 16, 1999. Note: copy of text and site mitigation plan map included in Appendix A.

[7]: John Minney Consulting Engineer report final *Subgrade/Stockpile* Testing for *Capitola* Gardens Subdivision, dated July 29, 1999. Note: copy of text and sample location map included in Appendix A.

[8]: County of Santa Cruz Health Services Agency letter: *Capitola* Gardens DDT Remediation Project, dated September 22, 1999. Note: a copy *of* this letter is included in Appendix A

[9]: University of Nevada Cooperative Extension: *DDT & DDE: Sources of Exposure and How to* Avoid Them, 2003.

[10]: Agency for Toxic Substances and Disease Registry (ATSDR): Toxicological *Profile* for *DDT, DDE &* DDD, 2003 (http://www.atsdr.cdc.gov)

residential. The following section provides background on the general use and breakdown of DDT and Dieldrin. Additional reference information is provided in Appendix C.

- Origin and Use: DDT and its primary breakdown metabolites DDE and DDD are manufactured chemicals and are not known *to* occur naturally in the environment. DDT is an organochlorine insecticide that was first developed in World War II and was successfully used to combat malaria, typhus, and other insect-borne human diseases among military and civilian populations. The World Health Organization indicates that up to twenty-five million lives were saved by the use of DDT to control pests.

  DDT came into wide agricultural and commercial usage in the late 1940s and was termed the "miracle" pesticide because of its low toxicity to warm-blooded animals, broad spectrum efficiency, long residual effects, and very low toxicity to plants. Studies have shown that plants growing in soils that contain typical levels of DDT in general do not uptake or store DDT and its metabolites in their tissues. Unfortunately, DDT was so extensively applied that some of the target insects developed resistance. Concerns about its persistence in the environment and possible health effects from bioaccumulation led to restridions and a ban in 1972.

  Dieldrin is a similar organochlorine pesticide/insecticide that was widely used from the **1950s** till 1970 and is also a common breakdown product of the pesticide Aldrin. Like DDT, Aldrin and Diedrin were banned in the early 1970's because of its persistence in the environment and possible health effects from bioaccumulation. Specifically, Dieldrin binds tightly to soil, breaks down very slowly in both soil and water, and does not volatilize readily. It has a relatively low residential PRG of 0.03 due to the ability of plants to take it in and store it.

- Phvsical Properties of DDT: When applied to soil DDT undergoes slow biodegradation (digestion by bacteria) through reductive dechlorination to form DDE and DDD (DDE is generally slower to break down and therefore more persistent than DDT). Studies have shown that DDT has a half-life in the soil of between **2** and **75** years.

  DDT and its metabolites are essentially immobile in soil, becoming strongly absorbed onto the surface layer of soils. DDT and its metabolites are usually concentrated in the top few inches because of their low solubility and tendency to strongly attach to soil particles, including organic matter. As a result they are rarely found in groundwater samples because the chemical is only slightly soluble in water and is more likely to stick to soil particles than to flow with groundwater in an aquifer. Because DDT and its metabolites do not degrade quickly in the environment, the amounts that may be left behind from applications that ceased three decades *ago* may be significant.

  In the past, Dieldrin (+Aldrin) entered the environment when farmers used these compounds to kill pests on crops and when exterminators used them to kill termites. Dieldrin is still present in the environment from these past uses because it breaks down (degrades) very slowly in soil or water. Dieldrin adsorbs to soil and may stay there unchanged for many years and it does not dissolve in water very well and is therefore not found in water at high concentrations Plants can take up Dieldrin from the soil and store it in their leaves and roots and fish or animals that eat Dieldrin-materials store the Dieldrin in their fat.

- Human Health Issues: **No** definitive association with exposure to DDT and its metabolites and illness with cancer has been made. **Industrial** workers heaviiy exposed to DDT during **its** manufacture and **compounding** have not had a higher incidence of cancer than workers not exposed to DOT. Hospital examinations of workers in DDT manufacturing plants **showed** no abnormalities that could be related to DDT even though their body fat contained up to ***648*** ppm DDT ***(see*** Appendix C for further details).

  Dieldrin is regulated by the FDA which mandates the allowable residue dieldrin in raw foods. The allowable range for residues is up to 0.1 ppm depending on the type of food product (allowable concentration **of** dieldrin in food considered to **be** safe). EPA advises lifetime drinking water exposure concentration limits for dieldrin to **be** 0.002 mg/L (protection against adverse non cancer health **effects)** and 0.0002 mg/L for protection against a cancer).

3.5 Health-Based Screening Levels **for** Detected **Pesticides:** Preliminary Remediation Goals (PRGs) are risk-based concentrations, derived from standardized equations combining exposure information assumptions with toxicity data[11]. They were established for the EPA cleanup programs and are used as initial screening levels by the California Department of Toxic Substances Control (DTSC) as they are considered to **be** protective for humans (including sensitive groups), over a lifetime.

The PRGs role in site "screening" **is** to help identify areas, contaminants, and conditions that do not require further environmental attention at a particular site. When considering PRGs as cleanup goals, it **is** EPA's preference *to* assume maximum beneficial **use** of a properly (that **is.** residential use). Generally, at sites where contaminant concentrations fall below PRGs, no further action or study is warranted ***so*** long as the exposure assumptions at a site match those taken into account **by** the PRG calculations. Sites exceeding a PRG suggest that further evaluation of the potential risks that may be **posed** by **site** contaminants is appropriate.

The following are the established, health-based PRGs for residential and industrial site use for contaminants of concern encountered at the subject site:

Contaminant	RESIDENTIAL PRG for Soil (mg/kg, parts per million)	INDUSTRIAL PRG for Soil (mg/kg, parts per million)
DDT	**1.7**	7
DDE	**1.7**	7
DDD	**2.4**	10
Dieldrin	**0.03**	**0.11**

Nota: Copy of PRG Tabk included **in** Appendix C **(October 2004)**

The proposed target cleanup level for residual **DDT** and its primary breakdown metabolites DDE

[11]: Region 9 EPA guidance document: Preliminary Remediation Goals *(PRGs)*, 2002 (http://www.epa.gov/Region9/waste/sfund/prg/index.htm). Note: A copy of the PRG table is included in Appendix C along with additional toxicological information on DDT.

and DDT will remain as 1 part per million (cumulative), in accordance with the cleanup level at adjoining parcels. That is the combined concentrations of DDT and its primary breakdown metabolites DDE and DDT will not exceed 1 part per million (ppm). Note that this proposed target cleanup level is well below human health-based PRGs for these compounds. The proposed cleanup level for Dieldrin is the conservative PRG screening level for residential sites (0.03 ppm).

4.0 FIELD WORK AND ANALYTICAL RESULTS: Shallow soil sampling and testing tasks were designed to determine whether long term commercial nursery operations at the subject site have impacted the surface soils with chemicals of concern. Surface and shallow soil samples were collected and tested for the suite of pesticide chemicals by EPA Method #8081A, which includes the common persistent organochlorine compounds of Dieldrin, DDT and its primary breakdown metabolites. Investigation work tasks followed due diligence guidelines for investigation and technical report preparation[12]. Copies of completed field logs and a description of sampling methodology are included in Appendix B.

4.1 Field Sampling: Soil samples were uniformly collected on January 20, 2005, on 50-foot centers across the 2.4-acre site (see Figure 2 for sampling layout). This conservative sampling and testing protocol was designed to provide confidence of worst case conditions. As a reference, DTSC sampling guidance documents for sampling of agricultural lands targeted for school development suggest discrete samples be taken from eight locations evenly spaced across 2 to 4-acre sites[13].

The exploratory borings were hand augured using a stainless steel hand auger. 'Surface samples" were collected from depths of 3-6 inches (all 25 surface samples were laboratory analyzed). Additional deeper samples will be collected from depths of 9-12 inches and 15-18 inches at each location (deeper samples from individual quadrants were subsequently analyzed at locations containing chemical compounds of concern, described below). Soil samples were continuously cored and augured and visually inspected by an experienced geologist for soil *type* and evidence of potential soil contamination (discoloration/odor). Additional documentation of field work including field logs, sample collection and chain of custody documentation is included in Appendix B.

4.2 Laboratory Analyses Results and Regulatory Threshold Limits: Laboratory results of current testing are tabulated on Table 1 (soil) and are presented graphically on Figure 3. The certified analytical report issued by the testing laboratory is included as Appendix A.

As described above, all twenty-five surface samples collected from a depth of 3-6 inches below

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[12]: County of Santa Cruz Environmental Health Service guidelines: Leak *Investigation* Guidelines *for* Site Investigation and Reporting, dated May 1991.

California Regional Water Quality Control Board guidelines, *Recommendations for* Preliminary Evaluation & Investigation of Underground Tank Sites, dated August 1990.

[13]: DTSC guidance document: *Interim* Guidance for Sampling *Agricultural Fields* for *School Sites,* dated August 26.2002. Note: Copy included in Appendix C

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ground surface were tested for persistent organochlorine pesticide compounds by EPA Method **#8081A.** In general, laboratory test results indicate that only trace to nondetectable concentrations of the suite of persistent organochlorine contaminant compounds were detected **(see** Table **2** for details). However, two specific compounds of concern (DDT and Dieldrin) were detected at nine locations at concentrations exceeded residential PRGs/target deanup levels described in Section 3.5 (above). Deeper samples **(9-12** inches) were subsequently tested for vertical delineation of the elevated DDT and Dieldrin. The following describes the results:

- Only two locations **(S-18 @ 5 39** pprn, and **S-25 @** 3.46 ppm) contained cumulative DDT (DDT, DDE, DDD) at concentrations exceeding: 1) PRG screening level of **1.7** ppm, and **2)** the SC-HSA-established cleanup level of 1 ppm.

- Eight locations contained Dieldrin *at* concentrations exceeding the PRG screening level of **0 03** pprn (S-1, **S-8,** S-11, **5-17, S-18, S-19, 523,** and **S-24, see** Figure **3).** Dieldrin concentrations ranged from **0.032** to 0.18 ppm.

In accordance with the workplan, the next deeper sample (the 9-12 inch sample) from these quadrants (ie. those quadrants containing either elevated DDT or Dieldrin) was tested to determine the vertical extent of the persistent pesticide compound. The results indicated:

- Neither of the two deeper samples tested for DDT exceeded PRG **(1.7** ppm) nor the SC-HSA-established cleanup levels **(1 ppm).**

- Only two of the nine deeper samples (S-1, and **5-23)** contained Dieldrin at concentrations at or exceeding the **0.03** ppm PRG for residential sites.

Again, in accordance with the workplan, the next deeper sample (the **15-18** inch sample) collected from the two quadrants containing elevated Dieldrin concentrations was tested to profile the vertical extent of the elevated concentrations. The test results indicate:

- Only the deeper soil sample from one of the two tested quadrants contained Dieldrin at a concentration that exceeded the **0.03** ppm PRG for residential sites (S-I). This sample location is where a stockpile of relatively low-level DDT and Dieldrin-impacted soils was buried under asphalt in **1999 (see** Section **3.3** for details). These soils were placed at this location in accordance with a regulatory-approved grading and soil's relocation plan which included placement of the soil in a **6-foot** deep pit and encapsulating with asphalt[14].

- Subsequent testing of three deeper **soil** samples collected from the S-1 boring location **(21-24** inches, **27-30** inches, and **33-36** inches) detected elevated Dieldrin concentrations exceeding the PRG of 0.30 ppm. Concentrations in these three samples ranged from **0.14** to **0.20** ppm (see Table 1 and Figure 1).

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[14]: John Minney Consulting Engineer report: ***Revised*** Grading ***Plan, Capitola Gardens*** Subdivision, dated March 16, 1999. Note: copy of text and site mitigation pian map included in Appendix A.

4.0 REMEDIATION (Grading) PLAN

A total of nine sample locations contained either DDT (two locations) **or** Dieldrin (eight locations) having concentrations that exceed the residential **PRG** for those locations. ***As*** noted above, concentrations of low-level DDT and Dieldrin exceeding PRG's for residential land use were detected in nine ***of*** these quadrants. We have obtained disposal acceptance from a local Class III landfill for these relatively low-level concentrations and we propose to transport these soils to this Class III landfill for appropriate disposal **(see** acceptance email, Appendix B).

Figure 3 presents approximate quadrant dimensions and volumes to be hauled. We estimate that a total of approximately **1,290** cubic yards (yd^3) of soil will need to be removed in order to obtain residential **PRG** concentrations for the shallow soils. The average concentrations of the **1,290** yd^3 **of** soil hauled is calculated to **be** 0.80 for DDT and 0.10 for Dieldrin. A breakdown of soil volumes we estimate will be removed from by quadrant follows:

- Area 1 (Quadrants **S-18,** -19, 5-23, **S-24,** and **S-25):** This area contains an approximate footprint of **21,500** ft^2. Soils in this area will be scraped to a depth of **7.5** inches which will generate an estimated volume of 500 yd'.

- Area 2 (Quadrant **S-17):** This area contains an approximate footprint of **4,000** ft^2 and soils in this area will be scraped to **a** depth of 7.5 inches which will generate an estimated volume of 95 yd^3.

- Area 3 (Quadrants ***S-8,*** and S-11): This area contains an approximate footprint of 6,200 ff. Soils will **be** scraped to a depth of **7.5** inches which will generate an estimated volume ***of*** 145 yd^3.

- Area 4 (Quadrant S-I): This is the location where relatively low-level DDT and Dieldrin-impacted soils were buried to a depth ***of*** 6 **feet** and encapsulated with asphalt. In order to **be** assured *of* a safe, health-based conditions, we propose to excavate out **to** a depth ***of*** 3 feet **at** this location and replace with a cap of clean, imported fill soils. The approximate footprint is 4,800 ff and soils in this area will **be** removed to a depth of 3 feet which will generate an estimated volume of **550** yd^3.

Scraping and loading of these non-hazardous soil volumes will **be** monitored by **a** geologist or engineer experienced with environmental excavation operations. Soils will be continuously wetted with a water truck or fire hose during excavation work to limit dust and no excavation work will **be** conducted in windy conditions (> 15 mph). In addition, clean imported fill materials will replace exported soils to planned development grades. **All** impacted soils will **be** hauled to Marina, Class III landfill (soils have been pre-approved for acceptance by the landfill). A letter documenting completion ***of*** the excavation work will be submitted following the grading and off-site disposal operations. No further soil sampling is required as confirmation samples oresented in this reoort document the vertical limits excavation. The letter report will include a scaled map showing the "as-built" limits of the completed excavation and documentation of landfill receipt of the soik.

4.0 LIMITATIONS

Our service consists of professional opinions and recommendations made in accordance with generally accepted geologic principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead to modifications of the options expressed herein.

If you have any questions or comments regarding this workplan, please contact us at our office (722-3580).

Respectfully submitted,

WEBER, HAYES AND ASSOCIATES
A California Corporation

Patrick Hoban
Senior Geologist

Joseph Hayes
Certified Engineering Geologist #1629

Attachments:

- Table 1: Tabulated Soil Results
- Figure 1: Topographic Location Map
- Figure 2: Aerial Vicinity Map and Site Map
- Figure 3: Soil Sample Locations and Analytical Results
- Appendix A: Certified Laboratory Results
- Appendix B: Landfill Acceptance Documentation & Field Sheets
- Appendix C: Reference Documents: Information on Dieldrin, DDT, DDE, and DDD
- Appendix D: Reference Documents: Assessment of Adjoining Lands

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APPENDIX D

Reference Documents on Adjoining Lands
- Previous Sampling Results and Rationale for Site Closure -

Report: ***Final Subgrade/Stockpile Testing for Capitola Gardens Subdivision***
(copy of text and sample location map)
John Minney Consulting Engineer report: dated July 29, 1999.

Report: ***Environmental Site Assessment for Antonelli Bros. Begonia Gardens***
(copy of tabulated results and sample location map)
Sampson Engineering Associates report: dated November 24, 1992.

Regulatory Closure Letter: ***Capitola Gardens DDT Remediation Project,***
County of Santa Cruz Health Services Agency letter, dated September 22, 1999.

Environmental Review Initial Study
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County of Santa Cruz

HEALTH SERVICES AGENCY

701 OCEAN STREET, R W M312, SANTA CRUZ, CA 950604073

(831) 454-2022 FAX: (831) 454-3128 TDD: (831) 4544123

ENVIRONMENTAL HEALTH

September 22, 1999

Bill Steiger
P.O. Box 66993
Scotts Valley, **CA** 95067

RE: **2545** Capitola Road, Capitola Gardens **DDT** Remedintion Project

Dear Mr. Steiger,

Please be advised that the above noted project has met this department's requirements in regard to sample location/sample results and soil removal and relocation.

Please proceed with the final paving of the planned parking lot area..

Please feel free to contact me at (831) **454-2753** between 8:00 and 9:30 a.m., Monday through Thursday.

Sincerely,

TIM EPPERSON, R.E.H.S.
Senior Environmental Health Specialist

TE:lv

cc: Jackie Young, Planning Department

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John M. Minney, Consulting Engineer
11976 Road 37
JMM **Madera Ranchos, CA 93638**
(559)275-5937 (559)645-1437
www.minney.com jmminney@qnis.net

July 25, 1999 **JOB 95021**

Bill Steiger
Hulter Construction
4444 Scott's Valley Rd.
Scott's Valley, California 95066

SUBJECT: Subgrade/Stockpile Testing
Parcel A
Capitola Gardens Subdivision

Dear Sir:

The subdivision site has been graded according to the revised Phase I grading plan.

According to the plan, 34 samples would be taken in five separate areas of the excavation. I took those samples on June 29, 1999. The locations of the samples are shown on Figure 1. Based upon my calculations that excavation should have generated a stockpile of nominally 2000 cubic yards.

I measured the stockpile at 1815 cubic yards, see the attached calculations. I consider that to be nominally 2000 cubic yards. According to the plan, 28 samples of the stockpile would be taken. I took those samples on June 29, 1999. The locations of the samples are shown an Figure 1.

The samples were tested for DDD/DDT/DDE by BSK Analytical Laboratories, which is certified by the State for that test procedure. The chain-of-custody and test results are attached.

The excavation and stockpile both tested as non-hazardous, except that final results on D-2 are still pending. The contractor shall complete their Phase I grading through construction of the parking lot on Antonelli Brothers property using the stockpiled soil as the subgrade but avoid the area of D-2 until that result is finalized. R-2 is located in the street.

If you have any questions or comments in this regard, please do not hesitate to contact me.

Yours truly,
John M. Minney, Consulting Engineer

John M. Minney
CE 32537
GE 602
REA 00212

JMM/bf

cc: Pete Antonelli
Bill Steiger

Attachments: Site Plan, 6/29/99
Chain of Custody
Test Results

TEL No. 6, 0 4:42 P.03

BSK ANALYTICAL LABORATORIES

Certificate of Analysis

John Mianey
John Mianey Engineering
11976 Road 37
Madera Ranchos, CA 93638

Preparation Date : 07/26/99
Analysis Date : 07/26/99
Report Issue Date : 07/28/99

Sample Date : 07/26/99
Sample Time : 09:30
Sample Type : SOLID

Submission Number : 9907000736
Lab Number : 122328
Project Number : 99021
Project Desc. :
Sample Description : D-2R

8080, Organochlorine Pesticides and PCB's, Solid

Analyte	Result	Units	PQL	Dil	DLR
Aldrin	ND	mg/kg	.05	1	0.05
a-BHC	ND	mg/kg	.05	1	0.05
b-BHC	ND	mg/kg	.05	1	0.05
g-BHC	ND	mg/kg	.05	1	0.05
d-BHC	ND	mg/kg	.05	1	0.05
Chlordane	ND	mg/kg	.5	1	0.5
4,4'-DDD	ND	mg/kg	.05	1	0.05
4,4'-DDE	ND	mg/kg	.05	1	0.05
4,4'-DDT	ND	mg/kg	.05	1	0.05
Dieldrin	ND	mg/kg	.05	1	0.05
Endosulfan I	ND	mg/kg	.05	1	0.05
Endosulfan II	ND	mg/kg	.05	1	0.05
Endosulfan sulfate	ND	mg/kg	.05	1	0.05
Endrin	ND	mg/kg	.05	1	0.05
Endrin aldehyde	ND	mg/kg	.05	1	0.05
Heptachlor	ND	mg/kg	.05	1	0.05
Heptachlor epoxide	ND	mg/kg	.05	1	0.05
Methoxychlor	ND	mg/kg	.05	1	0.05
Toxaphene	ND	mg/kg	0.5	1	0.5
Arochlor 1016	ND	mg/kg	0.5	1	0.5
Arochlor 1221	ND	mg/kg	0.5	1	0.5
Arochlor 1232	ND	mg/kg	0.5	1	0.5
Arochlor 1242	ND	mg/kg	0.5	1	0.5
Arochlor 1248	ND	mg/kg	0.5	1	0.5
Arochlor 1254	ND	mg/kg	0.5	1	0.5
Arochlor 1260	ND	mg/kg	0.5	1	0.5

ND : None Detected
mg/L : Milligrams/Liter = ppm
ug/L : Micrograms/Liter = ppb
mg/kg : Milligram/Kilogram = ppm
ug/kg : Microgram/Kilogram = ppb

PQL : Practical Quantitation Limit
Dil : Dilution Factor
DLR : Reportable Detection Limit
derived by (PQL x Dil)
Higher limits may result from exceptional sample matrices or interferences

Conversions:
1 ppm = 1000 ppb
1 ppb = 0.001 ppm

3414 Blandilaus Street • Fresno, CA 93706-1623 • Phone 559-497-2848, In CA 800-877-8310 • Fax 559-485-6935

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PHASE I
GRADING PLAN

1. Areas 1 through 5 contain organochlorine pesticides resulting from legal application which exceed the TTLC concentration of 1 ppm for DDT, DDD, and DDE. The TTLC concentration is considered hazardous.

2. Excavate Areas 1 through 5 to a depth of 6 inches.

3. Stockpile soils containing DDT, DDE, DDD over 1ppm. (7 ± high)

4. Test soil from Areas 1 through 5 per EPA 8080. Samples to be representative of the surface 6". Perform the following number of teats for each Area.

Area 1: 15 tests
Area 2: 8 tests
Area 3: 2 tests (Nominal 55' grid)
Area 4: 3 tests
Area 5: 8 tests

5. For any tested locations which exceed 1 ppm for DDT, DDD and DDE, excavate that location an additional 6", stockpile that soil, and retest.

6. Once Areas 1 through 5 all teat below 1 ppm for DDT, DDD and WE, excavation Is complete.

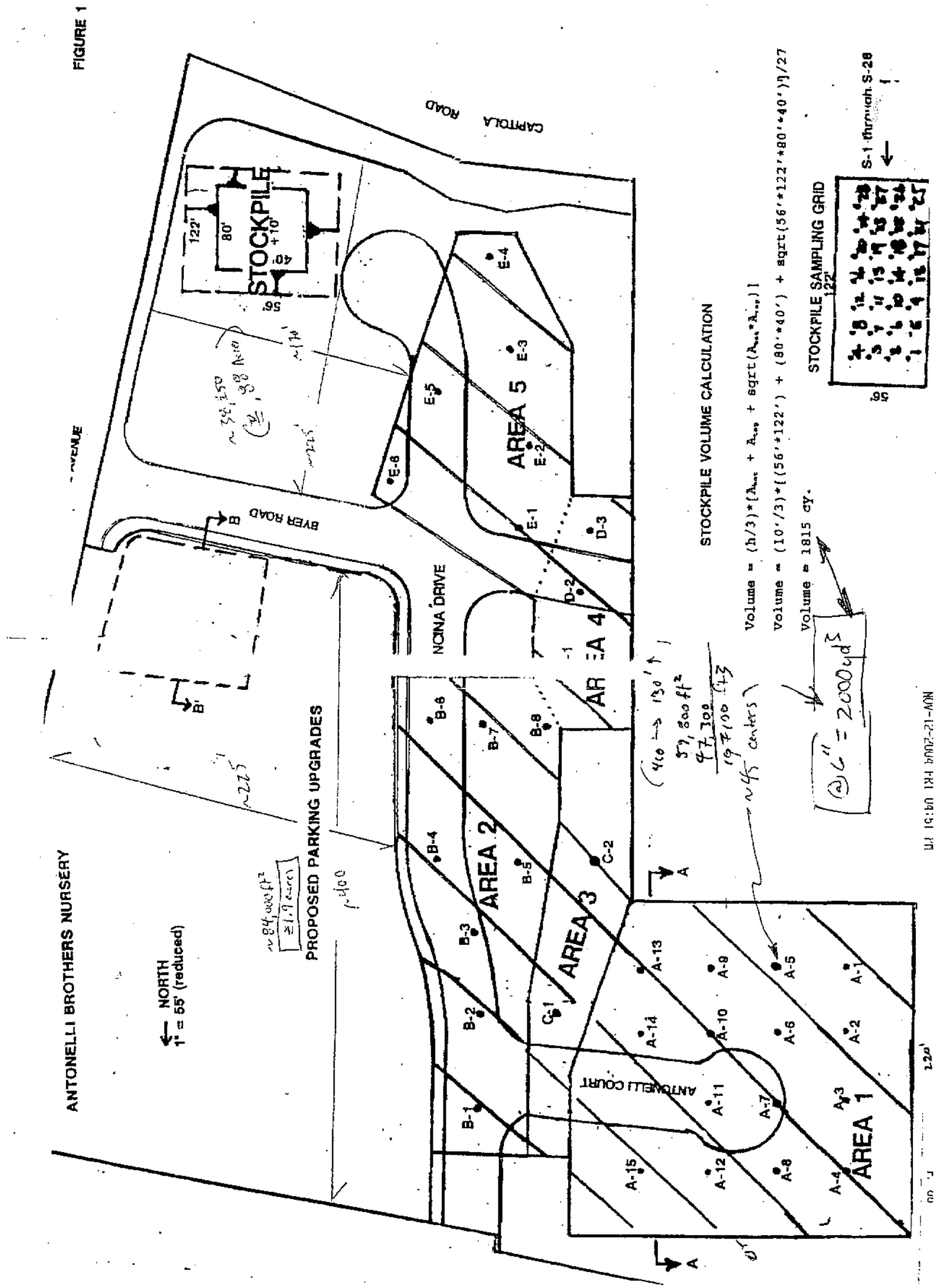
7. Excavate parking lot areas an Nursery lo e depth of 6".
Place meae sola in A— 1 through 5.
Place in lifts not exceeding 6 inches, moisture condition and compact per Santa Cruz County standards. Place until original grade is achieved.
Stockpile excess parking lot excavation

8. Test the Stockpile containing DDT, DDD and DDE over 1 ppm.
Take a minimum of 28 samples and test per TTLC method.
me characteristic concentration of the stockpile Is defined as the average of the tests.
If the average TTLC concentration exceeds the 1ppm criteria for DDT, DDD and WE, determine the concentration of portland cement to achieve the STLC criteria using deionized water and an intact specimen size of nominal 1" dia. x 2" high.

9. Place the Stockpiled soils containing O M, DDE and DDD in the parking lot excavati
Place the soil in lifts not exceeding 8 inches compacted thickness and compact to Santa Cruz County standards.
Add portland cement as necessary to achieve STLC criteria, if required by Item 8 above.

PO. Place excess parking stockpile in excavation. Compact in 6 Inch lifts to meet Santa Cruz county standards.

11. Complete site grading as outlined by Hland Engineers, February 20, 1990.
Parcel A, Capitola Gardens Subdivision



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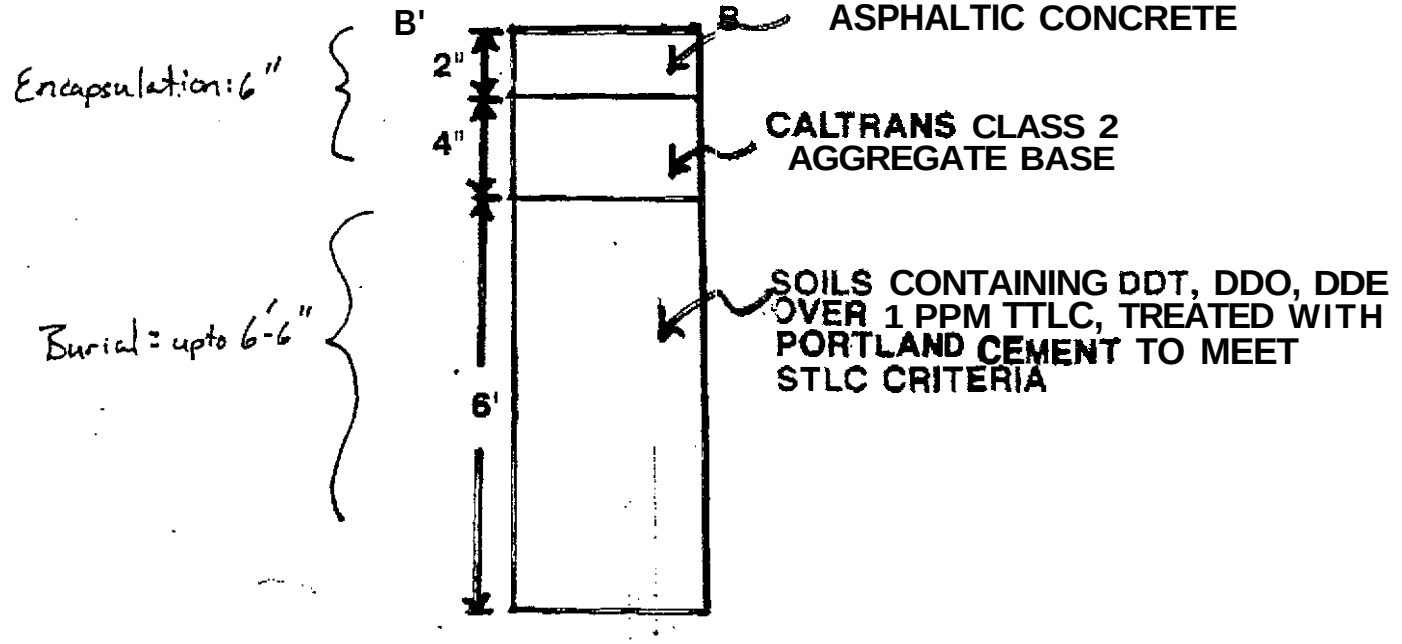
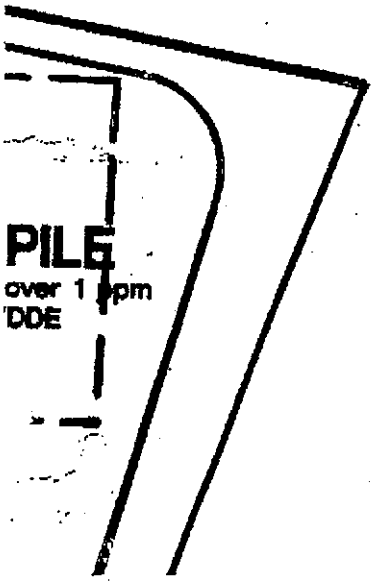
CROSS-SECTION B-B' = BURIAL SKEMATIC





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APPLICATION 05-0269

John M. Minney, Consulting Engineer
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www.minney.corn jmminney@qnia.net

March **16,** 1999

JOB 95021

Tim Epperson
Environmental Health Department
Santá Cruz County
701 Ocean Street
Santa Cruz, California 95060-4070

SUBJECT: Revised Grading Plan
Parcel A
Capitola Gardens Subdivision

Dear Sir:

As discussed with the Owners and deeveloper, I have put together this revised grading plan for Phase I. The developer has met with the County in order to address their concerns regarding approval of the revised grading plan.

The plan is to take **soils** identified as containing excess levels of DDT or its breakdown products and use those soils **as** conventional parking lot subgrade in areas of the existing Antonelli Brother Nursery, a contiguous adjoining property, which would not **be** used for utilities **so** that neither the general public **nor** utility workers **would** be exposed to these soils, as well **as** further restricting the very limited ability of DDT to migrate. The relevant pathways are therefore surface soil exposure to the general public, **subsurface soil** exposure to utility workers, and subsurface **water** migration to off-site raceptors.

Antonelli Brothers Begonia Nursery **was** the operation which preceded the proposed Capitola Gardens Subdivision. The nursery operated in the time frame that DDT was legal to use and used DDT **on** the proposed subdivision site. The nursery **will** continue to operate after the subdivision is developed and will expand the parking facilities on the nursery property. The pteparation of the subgrade at both sites for construction purposes will therefore **take** place simultaneously. This will enable the work to be performed by a single contractor.

DDT **was** first used in a widespread fashion in World War **51.** The **US** EPA revoked the registration of DDT for usage **as** an agricultural chemical in the early 1970's. At the time DDT waa introduced, it was **known** that **it** did not readily break down in the environment and this was considered one of its most positive attributes. At the time its registration was revoked, the fact that **it** did not readily break **down** in the environment **was** considered one of ita most negative attributes. DDT and **its** breakdown products **DDE** and DDD **are still** uaed today in **the U.S. as** the active ingredient in certain'prescription medicine.

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Capitola **Gardens** Subdivision **JOB 95021**

DDT, DDD and DDE are considered one chemical from **the** standpoint of the regulations. The hazardous concentration for lifetime exposure of DDT/DDD/DDE is considered to be one (1) mg/kg (ppm), which is calculated by summing the concentrations of DDT, DDD and DDE. The U.S. EPA determined in **1974** that the average concentration of DDT in Soil in the United States was 0.35 mg/kg.

The nursery property was evaluated for the presence of DDT/DDD/DDE in the early **1990's**. The definitive assessment is shown on Figure 2 by Sampson Engineering Associates, 11/24/92. The soil sample locations are shown, as well as the extent of the DDT/DDD/DDE as interpreted from those soil samples. The soil **sample** test results are given on Pages 7 through 16 of that report. It was concluded that an excavation depth of 6 inches in the areas shown on Figure 2 would encompass **all** the **soils** which exceeded **a** lifetime hazardous exposure amount. **There** is a total of **nominally** 2000 cubic **yards** of soil which has been identified.

Seven years have transpired since the last detailed soil tenting for DDT/DDD/DDE at the site. In the life-span of DDT/DDD/DDE that is not very substantial. It is likely that the DDT/DDD/DDE concentrations today **are** similar to or slightly **less** than the previous results.

The **top** six inches ***of*** soil at the site, absent significant vegetation, would normally be suitable for road subgrade. The DDT/DDD/DDE concentrations are such trace levels that they have no impact on the capability of the soil to structurally support a road.

In early 1998, **we** obtained a composite sample which would **give a** preliminary indication of what the concentration in the stockpile would be. Those test results are attached and indicate that the stockpile would total 0.61 mg/kg for DDT/DDD/DDE, which is non-hazardous. It is common for the stockpile concentration to be less than the soil "hot spot" values from which the stockpile is created.

I have prepared a **grading** plan for the site which **shows** the excavation of identified soils from the subdivision **and** the use of those soils as pavement subgrade in the parking lot improvements for the nursery.

The DDT applied to the subdivision site was **not a** waste disposal operation and the DDT/DDD/DDE is therefore not hazardous waste. The CEQA process, which is **broader** than the hazardous waste regulations, requires consideration **as** to whether the general public would be exposed to hazardous concentrations by the project. By using the impacted soils as road **subgrade** in the commercial parking lot project, the general public would not be exposed to hazardous concentrations of DDT/DDD/DDE.

The County has **expressed** a concern regarding the potential **for** exposure of public utility workers to the DDT/DDD/DDE which would then

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be present in the pavement subgrade. No public utilities will be placed in the subgrade of the parking lot for the nursery.

The County has expressed a concern that the DDT/DDD/DDE could migrate underground to cause an impact to beneficial uses of surface water, groundwater or other off-site areas. The Merck Index, one of the most widely used chemical references, describes DDT as "practically insoluble in water, dilute acid8 and alkalies." My om personal experience on DDT sites has been that it simply does not migrate through the soil. The fact that tne site has not had DDT applied In over 25 years and the DDT/DDD/DDE is still sitting in the top 6 inches gives strong evidence that at this particular site it is not mobile. Finally, the grading which is proposed would result in the impacted soils baing under a commercial parking lot and away from the public utility lines, which restricts the mobility of the DDT/DDD/DDE.

Based upon prior consultations with the' County Environmental Health Department, additional testing for DDT/DDD/DDE has been proposed as Part of the grading operation. The testing will include the stockpile soil and the base of the excavation from which the stockpiled soil comes. The approval letter is attached. There are 34 tests proposed for the excavated area and 28 tests for the stockpile. The sample locations would be selected in conjunction with the County Environmental Health personnel in the field. The samples would be taken in containers provided by the certified testing which would perform the testa per BPA method 8080. The sampler would have a Title 22 sampling certification and chain-of-custody would be maintained. BSX Analytical Labs of Presno would perform the testing. There is a contingency plan to treat the soil with portland cement in the event that the stockpile concentration exceeds a hazardous concentration. Portland cement would further bind up the DDT/DDD/DDE and improve the subgrade support capability for the roadway. Whereas DDT/DDD/DDE has a distinct tendency to stick to heavy clay particles, it has even a greater tendency to stick to portland cement particles.

The standard CBQA process also takes into consideration the "no project" alternative. In that case, the surface sails would continue to exist at levels above the lifetime exposure hazardous concentration. The site is currently an undeveloped field, with the possibility for occasional exposure to the general public. By implementing the proposed project, the exposure pathway for the general public is greatly reduced while other features of the project mitigate potential exposure pathways for utility workers and subsurface migration.

upon conclusion of the Phase I grading, the subdivision site will essentially look the same as it does now, except that it will be bare of vegetation in the graded areas until wet weather arrives.

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Antonelli Brothers Santa Cruz, California JOB 95021

The County has given us a checklist of other items which are to be addressed by the grading plan. These items are addressed as follows:

1a. Intent of Grading: The intent of the grading is to take 2000 cubic yards of soil from the surface of the site and compact it to parking lot standards on a commercial lot. Concurrently, the soil will be tested for legally applied DDT to establish that no hazardous exposures of DDT to the general public will occur in a roadway that may be constructed which the soil is compacted.

1b. Name and address of owner: Pete Antonelli, 2180 Burr Court, Santa Cruz, California 95067.

1c. Assessor's Parcel Number: APN 29-111-47

1d. Vicinity Mag: Attached .

1e. Name and Location Of Existing Streets: Shown

1f. Volume of work; cut and fill: 2000 cubic yards

1g. Scale: 1"=50'

1h. North Arrow: Shown

1i. Bench Mark: Attached

1j. Location of septic tanks, leach fields & expansion area: None existing or proposed.

2a. Bxiating drainage (including culverts),: No change from existing allowed condition.

2b. Existing structures: None existing or proposed.

2c. Existing grading completed on site: None.

2d. Existing roadway and driveway: None on subdivision site. Shown on commercial property.

2e. Proposed limits of grading: Shown.

2f. Proposed drainage (including culverts, drain pipes, etc.): No change from existing allowed condition.

2g. Proposed change in grade: No change from existing allowed condition.

2h. Proposed roadways: None, only parking lot subgrade work proposed.

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2i. Road details: Subgrade details for parking lot shown. Paving proposed for commercial property.

Zj. Drainage along proposed roadway: No change from existing allowed condition.

2k. Cut/fill slope gradients: No change from existing allowed condition.

2l. Required back drains: None.

2m. Pavement eections: Subgrade details shown.

2n. Fill testing requirements: Shown.

20. Cuts to be reconstructed as fill: Final grades restore site to existing, approved condition.

2p. Cuts requiring inspection by soils engineer: Shown.

2q. Setbacks to property line: No change from existing approved condition.

2r. Setbacks to environmentally aensitive areas: None.

28. Setbacks to structures: None.

2t. Setbacks from slopes: NO change from existing approved condition.

2u. Setbacks to flood zones: Not applicable.

2v. Erosion control: No change from exieting approved condition when vegetation reestablishes itself or pavement is replaced.

2w. Cross Sections of all proposed cut and fill slopes, building pads; No change from existing approved condition.

2x. Signature of Civil Engineer: Shown.

2y. Signature of Engineering Geologist: Not applicable.

2z. Signature of Soils Engineer: Shown.

2aa. Reference to all completed technical reports: The following lists all completed technical reports on the project related to soils. Those reports which did not address the legal application of DDT in their conclusions are noted to be disregarded. Unless otherwise noted, the data included in these reports is considered representative of the site.

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Preliminary Environmental Assessment, Lands of Antonelli Brothers, Santa Cruz County, California, Carson Consultants, 11/13/89. (Disregard)

Lands of Antonelli Bros., Lee & Pierce, 4/12/91. (Disregard)

Lands of Antonelli Bros., Lee & Pierce, 5/6/91. (Disregard)

Lands of Antonelli Bros., Lee & Pierce, 7/15/91. (Disregard)

Supplemental Environmental Assessment, Lands of Antonelli Brothers, Santa Cruz County, California, Carson Consultants, 8/16/91. (Disregard)

Antonelli Brothers Begonia Gardens, Environmental Site Assessment, Sampson Engineering Associates, 11/24/92. (Disregard)

Revised Sampling Plan, Antonelli Brothers Begonia Gardens, Sampson Engineering Associates, 9/24/92.

Proposed Bioremediation Testing Plan, Antonelli Brothers Begonia Gardens, Sampson Engineering Associates, 4/8/93.

Legal Usage of DDT, Antonelli Brothers Begonia Gardens, John Minney, 8/25/95.

Phase I Grading Plan, Capitola Gardens Subdivision, John Minney, 21/24/95.

Phase I Grading Plan, Capitola Gardens Subdivision, John Minney, 2/2/96,

Phase I Grading Plan, Capitola Gardens Subdivision, John Minney, 3/13/98.

As I indicated in previous reports, the hazardous Concentration of one part per million for DDT/DDD/DDE is based upon a lifetime exposure, which is 70 years. That represents a residential exposure condition. By placing the soils as pavement subgrade on a commercial property, the DDT/DDD/DDE concentrations are not hazardous because the commercial exposure times are much less. The grading therefore meets all currently relevant exposure criteria assuming no change in the DDT/DDD/DDE concentrations from that which currently exists.

The grading plan incorporates feature8 approved by the County environmental health department: which would make the soils consistent the relevant residential exposure criteria. In the unlikely event that the soils exceed the TTLC hazardous concentration threshold,

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portland cement will be added to the soils. This will improve the subgrade support capabilities of those soils for pavement **purpoaee,** as well **as reduce** the concentration by the STLC method to below hazardous concentration thresholds.

NO public utility workers or residents **would** be in contact with the parking lot subgrade **soils.**

If you have ***any*** questions or comments in this regard, please do not hesitate to contact me.

Yours truly,
John M. Minney, Consulting Engineer

John M. Minney
CE 32537
GE 602
REA 00212

JMM/bf

cc: Pete **Antonelli**
Bill Steiger

Attachments: Grading **Plan,** 3/16/99
Bench **Mark** Mag
Figure 2, Sampson and Associates
Pages 7 through 16, Sampson **and** Associates
County Environmental Health letter
Testing Reaults

Environmental Review Inital Study
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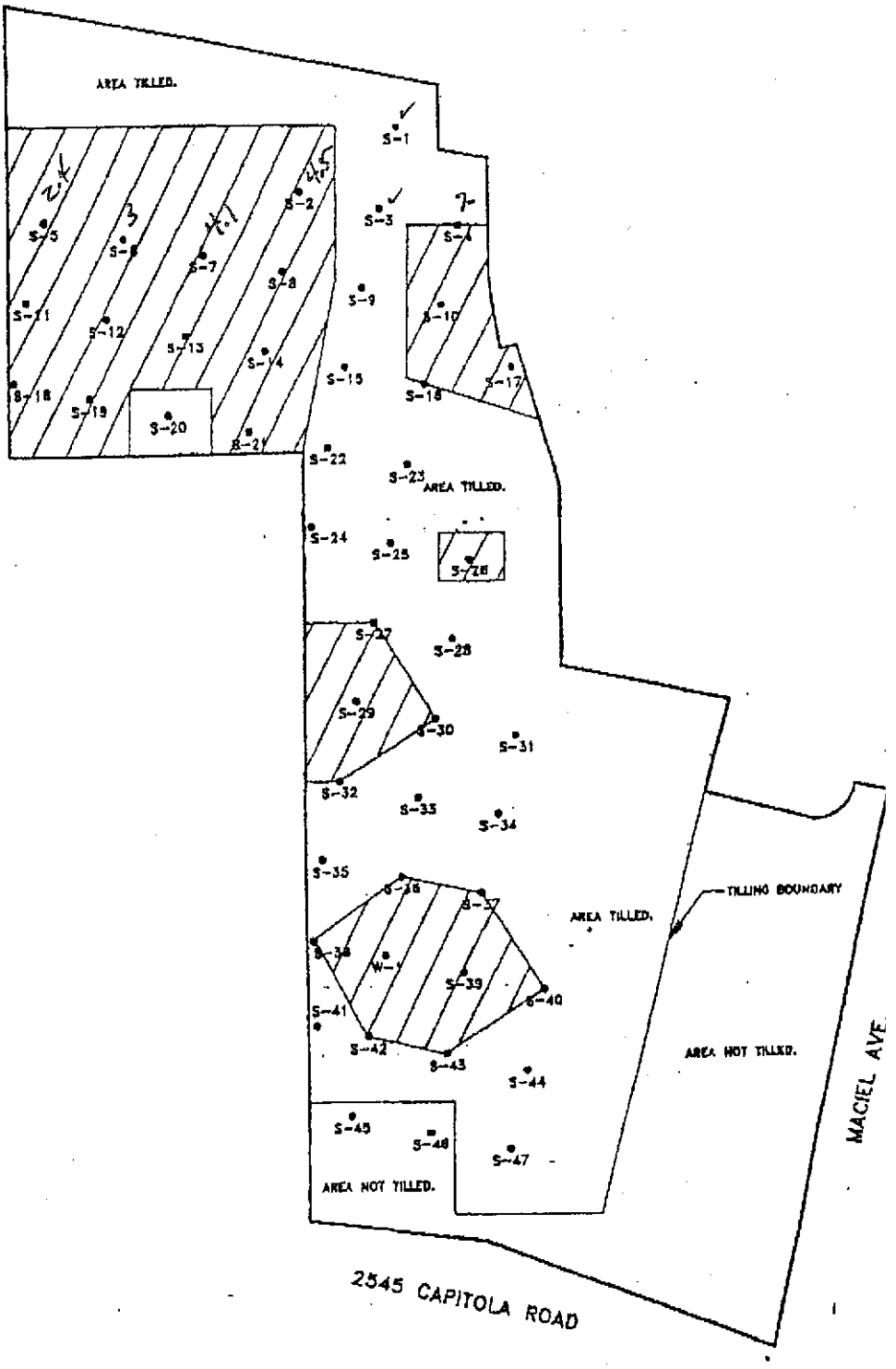

SAMPSON ENGINEERING ASSOCIATES
6 HANGER WAY, SUITE C
WATSONVILLE, CA 95076

SITE MITIGATION PLAN

LANDS OF ANTONELLI BROTHERS
SANTA CRUZ COUNTY, CALIFORNIA

FIGURE 2

TABLE 1
SUMMARY OF LABORATORY RESULTS FOR SOIL AND WATER SAMPLES (ppm)

Analyte	Sample S-1	Sample S-2	Sample S-3	Sample S-4	Sample S-5	Detection Limit
Aldrin	ND	ND	ND	ND	ND	0.008
alpha-BHC	ND	ND	ND	ND	ND	0.008
beta-BHC	ND	ND	ND	ND	ND	0.008
delta-BHC	ND	ND	ND	ND	ND	0.008
gamma-BHC (Lindane)	ND	0.01	ND	ND	0.05	0.008
alpha-Chlordane	ND	0.02	ND	0.01	0.07	0.008
gamma-Chlordane	ND	0.02	ND	ND	0.08	0.008
2,4'-DDD	ND	0.12	ND	0.02	0.13	0.003
4,4'-DDD	ND	0.49	0.01	0.14	0.79	0.003
2,4'-DDE	ND	ND	ND	0.01	0.03	0.003
4,4'-DDE	ND	1.2	0.02	0.44	0.84	0.003
2,4'-DDT	ND	0.28	ND	0.13	ND	0.003
4,4'-DDT	0.01	2.6	0.01	1.3	0.56	0.003
Dieldrin	ND	ND	ND	ND	ND	0.016
Endosulfan I	ND	ND	ND	ND	ND	0.008
Endosulfan II	ND	ND	ND	ND	ND	0.016
Endosulfan Sulfate	ND	ND	0.04	0.02	ND	0.016
Endrin	ND	ND	ND	ND	ND	0.016
Endrin Aldehyde	ND	ND	ND	ND	ND	0.016
Endrin Ketone	ND	ND	ND	ND	ND	0.016
Heptachlor	ND	ND	ND	ND	ND	0.008
Heptachlor Epoxide	ND	ND	ND	ND	ND	0.008
Methoxychlor	ND	ND	ND	ND	ND	0.08
Toxaphene	ND	ND	ND	ND	ND	0.160
PCB's	ND	ND	ND	ND	ND	0.160

ND = None detected

Quantitative chemical analysis by EPA Test Method 8080.

Note: All samples taken were surface samples (within six inches of the surface). See Appendix A, *Figure* 1 - Site Plan for Sample locations.

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APPLICATION 05-0269

TABLE 1 (CONTINUED)
SUMMARY OF LABORATORY RESULTS FOR SOIL AND WATER SAMPLES (PPM)

Analyte	Sample S-6	Sample S-7	Sample S-8	Sample S-9	Sample S-10	Detection Limit
Aldrin	ND	ND	ND	ND	ND	0.008
alpha-BHC	ND	ND	ND	ND	ND	0.008
beta-BHC	ND	ND	ND	ND	ND	0.008
delta-BHC	ND	ND	ND	ND	ND	0.008
gamma-BHC (Lindane)	0.03	0.01	0.01	ND	0.04	0.008
alpha-Chlordane	ND	ND	0.01	0.02	0.02	0.008
gamma-Chlordane	0.01	ND	0.01	0.02	0.01	0.008
2,4'-DDD	0.08	0.06	0.04	0.10	0.14	0.003
4,4'-DDD	0.50	0.45	0.26	0.30	2.4	0.003
2,4'-DDE	0.01	0.01	0.01	0.01	0.11	0.003
4,4'-DDE	0.60	0.44	0.48	0.50	1.4	0.003
2,4'-DDT	ND	0.23	0.19	ND	ND	0.003
4,4'-DDT	1.8	3.0	1.9	0.24	13	0.003
Dieldrin	ND	ND	ND	ND	ND	0.016
Endosulfan I	ND	ND	ND	ND	ND	0.008
Endosulfan II	ND	0.03	0.03	ND	ND	0.016
Endosulfan Sulfate	ND	0.10	0.06	0.02	ND	0.016
Endrin	ND	ND	ND	ND	ND	0.016
Endrin Aldehyde	ND	ND	ND	ND	ND	0.016
Endrin Ketone	ND	ND	ND	ND	ND	0.016
Heptachlor	ND	ND	ND	ND	ND	0.008
Heptachlor Epoxide	ND	ND	ND	ND	ND	0.008
Methoxychlor	ND	ND	ND	ND	ND	0.08
Toxaphene	ND	ND	ND	ND	ND	0.160
PCB's	ND	ND	ND	ND	ND	0.160

ND = None detected

Quantitative chemical analysis by EPA Test Method 8080.

Note: Samples taken were surface samples (within six inches of the surface).

See Appendix A, Figure 1 - Site Plan for sample locations.

Environmental Review inital Study
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TABLE 1 (CONTINUED)
SUMMARY OF LABORATORY RESULTS FOR SOIL AND WATER SAMPLES (PPM)

Analyte	Sample S-11	Sample S-12	Sample S-13	Sample S-14	Sample S-15	Detection Limit
Aldrin	ND	ND	ND	ND	ND	0.008
alpha-BHC	ND	ND	ND	ND	ND	0.008
beta-BHC	ND	ND	ND	ND	ND	0.008
delta-BHC	ND	ND	ND	ND	ND	0.008
gamma-BHC (Lindane)	0.01	0.03	0.03	0.06	ND	0.008
alpha-Chlordane	0.01	ND	ND	0.04	0.01	0.008
gamma-Chlordane	ND	ND	ND	0.03	ND	0.008
2,4'-DDD	0.05	0.06	0.35	0.26	0.02	0.003
4,4'-DDD	0.36	0.46	2.7	1.8	0.12	0.003
2,4'-DDE	ND	ND	ND	0.05	0.01	0.003
4,4'-DDE	0.95	0.61	3.3	2.9	0.38	0.003
2,4'-DDT	ND	ND	ND	ND	0.09	0.003
4,4'-DDT	2.1	1.9	0.96	8.6	0.65	0.003
Dieldrin	ND	ND	ND	ND	ND	0.016
Endosulfan I	ND	ND	0.09	ND	ND	0.008
Endosulfan II	ND	ND	ND	ND	ND	0.016
Endosulfan Sulfate	ND	ND	ND	ND	ND	0.016
Endrin	ND	ND	ND	ND	ND	0.016
Endrin Aldehyde	ND	ND	ND	ND	ND	0.016
Endrin Ketone	ND	ND	ND	ND	ND	0.016
Heptachlor	ND	ND	ND	ND	ND	0.008
Heptachlor Epoxide	ND	ND	ND	ND	ND	0.008
Methoxychlor	ND	ND	ND	ND	ND	0.08
Toxaphene	ND	ND	ND	ND	ND	0.160
PCB's	ND	ND	ND	ND	ND	0.160

ND = None detected

Quantitative chemical analysis by EPA Test Method 8080.

Note: Samples taken were surface samples (within *six* inches of the surface)

See Appendix A, Figure 1 - site Plan for sample locations.

Environmental Review Initial Study
ATTACHMENT 4, 3 of 12,
APPLICATION -1269

TABLE 1 (CONTINUED)
SUMMARY OF LABORATORY RESULTS FOR SOIL AND WATER SAMPLES (PPM)

Analyte	Sample S-16	Sample S-17	Sample S-18	Sample S-19	Sample S-20	Detection Limit
Aldrin	ND	ND	ND	ND	ND	0.008
alpha-BHC	ND	ND	ND	ND	ND	0.008
beta-BHC	ND	ND	ND	ND	ND	0.008
delta-BHC	ND	ND	ND	ND	ND	0.008
gamma-BHC (Lindane)	0.01	0.06	0.01	0.04	0.01	0.008
alpha-Chlordane	0.01	0.07	0.01	0.10	0.03	0.008
gamma-Chlordane	0.01	0.07	ND	0.10	0.02	0.008
2,4'-DDD	0.06	0.20	0.10	0.07	0.05	0.003
4,4'-DDD	0.36	3.8	0.63	0.39	0.39	0.003
2,4'-DDE	0.07	0.19	0.02	0.08	ND	0.003
4,4'-DDE	0.63	3.9	1.1	0.62	0.42	0.003
2,4'-DDT	ND	ND	ND	ND	ND	0.003
4,4'-DDT	1.2	24	2.0	1.9	0.34	0.003
Dieldrin	ND	ND	ND	ND	ND	0.016
Endosulfan I	ND	ND	ND	ND	0.02	0.008
Endosulfan II	ND	ND	ND	ND	ND	0.016
Endosulfan Sulfate	ND	ND	ND	ND	ND	0.016
Endrin	ND	ND	ND	ND	ND	0.016
Endrin Aldehyde	ND	ND	ND	ND	ND	0.016
Endrin Ketone	ND	ND	ND	ND	ND	0.016
Heptachlor	ND	ND	ND	ND	ND	0.008
Heptachlor Epoxide	ND	ND	ND	ND	ND	0.008
Methoxychlor	ND	ND	ND	ND	ND	0.08
Toxaphene	ND	ND	ND	ND	ND	0.160
PCB's	ND	ND	ND	ND	ND	0.160

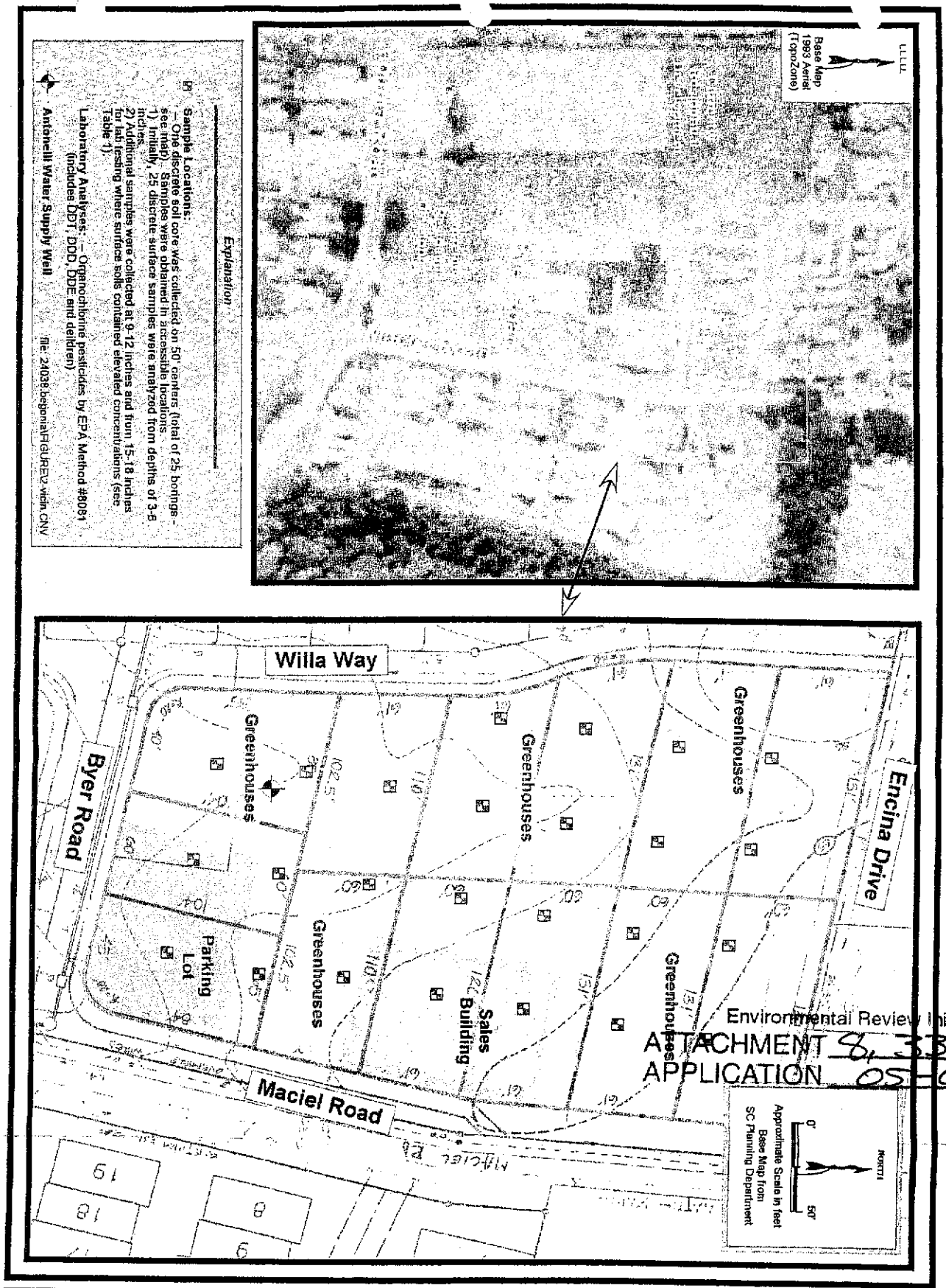
ND = None detected

Quantitative chemical analysis by EPA Test Method 8080.

Note: Samples taken were surface samples (within six inches of the surface).

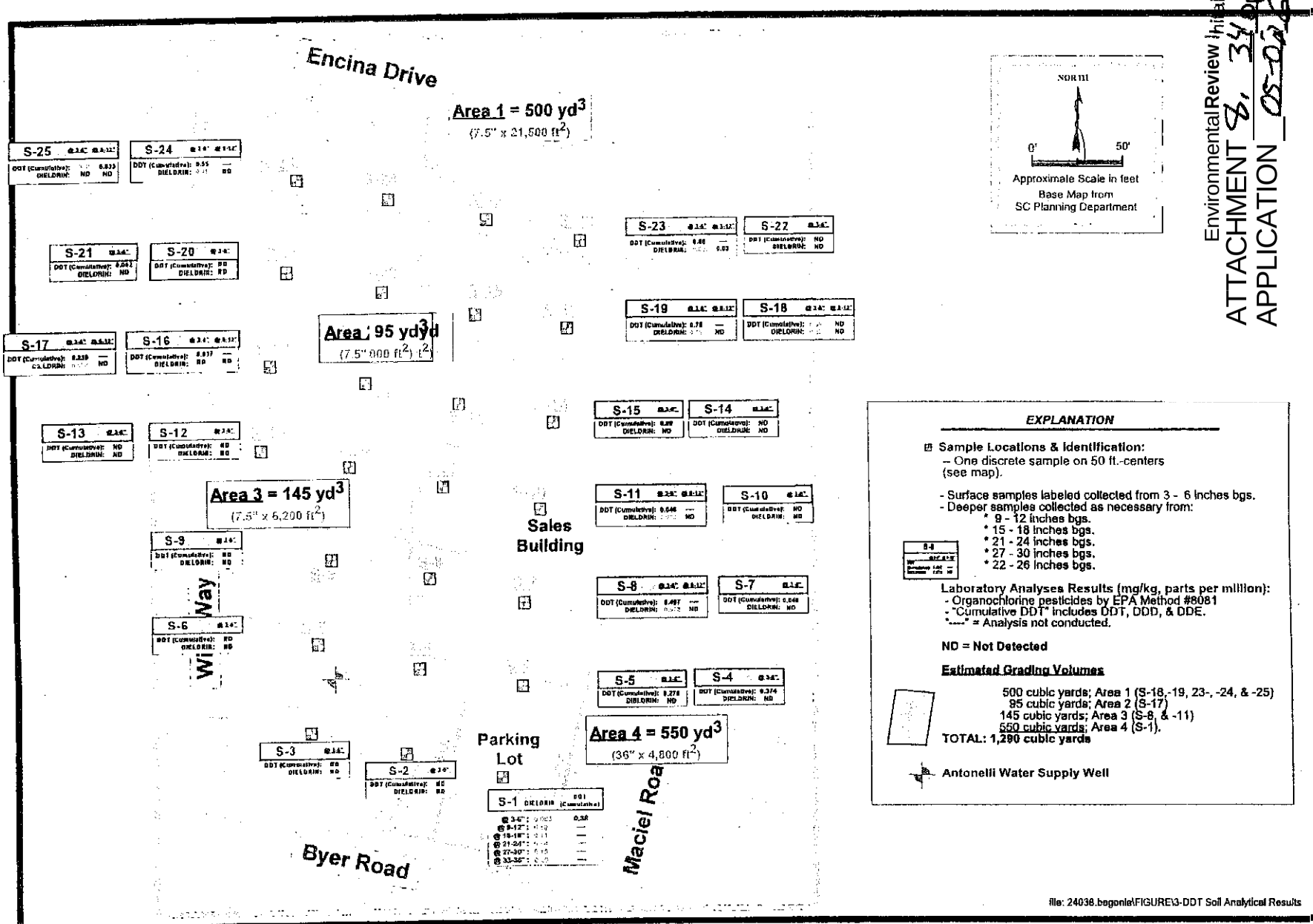
See Appendix A, Figure 1 - Site Plan for sample locations.

Environmental Review Inital Study
ATTACHMENT 6, 32 of 121
APPLICATION 05-0269



Environmental Review Initial Study
ATTACHMENT 8, 33 of 121
APPLICATION 05-0269

Weber, Hayes & Associates **Hydrogeology and Environmental Engineering** 120 Westgate Drive, Watsonville, Ca. 95076 (831) 722 - 3580 (831) 662 - 3100	**VICINITY & SITE MAP** **Antonelli Begonia Gardens Nursery** 2545 Capitola Road Santa Cruz, California (APN #029-37-118)	**FIGURE** 2 Job # 24038



Environmental Review Initial Study
ATTACHMENT 8, 34 of 42
APPLICATION 05-0264

FIGURE 3
Job # 24038

SITE MAP
Sample Locations & Soil Analytical Results
Antonelli Begonia Gardens Nursery
2541 Capitola Road
Santa Cruz, California
(APN #029-37-118)

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Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

file: 24036.begonia\FIGURE\3-DDT Soil Analytical Results

APPENDIX A

Certified **Lab Reports**

January 20, 2005
(Initial samples)

February 16, 2004
(additional confirmation samples)

Environmental Review Inital study
ATTACHMENT 8, 35 of 121
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722 1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: Begonia Gardens DDT / 24038
LABORATORY: Entech
SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney
TURNAROUND TIME: (Standard Five-Day) 48hr Rush 72hr Rush
ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO
GLOBAL I.D.: --
Sampler: Jered Chaney / Josh Hannaleck
Date: 1/20/2005

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL. Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-Diesel	Total Recoverable Petroleum Hydrocarbons	TPH Gasoline by EPA Method GC - MS	Volatile Organics: Fuel Oxygenates & BTEX EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Organochlorine Pesticides EPA Method# 8081
#2102-001 S-1a	3 - 6"	1/20/2005	AM	Soil				1								X
002 S-1b	9 -12"		AM					1								HOLD
003 S-2a	3 - 6"		PM					1								X
004 S-2b	9 -12"		PM					1								HOLD
005 S-3a	3 - 6"		AM					1								X
006 S-3b	9 -12"		AM					1								HOLD
007 S-4a	3 - 6"		PM					1								X
008 S-4b	9 -12"		PM					1								HOLD
009 S-5a	3 - 6"		PM					1								X
010 S-5b	9 -12"		PM					1								HOLD
011 S-6a	3 - 6"		PM					1								X
012 S-6b	9 -12"		PM					1								HOLD
013 S-7a	3 - 6"		PM					1								X
014 S-7b	9 -12"		PM					1								HOLD

RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.)	1/20/05 1447		1/21/05 1407
2.)	1/21/05 1553		1/24/05 1600
3.)			
4.)			
5.)			

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- [ ] If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- [ ] For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.
- [ ] Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

- Please HOLD deeper samples "b" for possible later analysis.

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ATTACHMENT 4 to 36 of 121
APPLICATION 05-0269
Environmental Review Inital Study

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: Begonia Gardens DDT / 24038

LABORATORY: Entech

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

TURNAROUND TIME: (Standard Five-Day) 48hr Rush 72hr Rush

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

GLOBAL I.D.: –

Sampler: Jered Chaney / Josh Hannaleck

Date: 1/20/2005

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-Diesel	Total Recoverable Petroleum Hydrocarbons	TPH-Gasoline by EPA Method GC - MS	Volatile Organics: Fuel Oxygenates & BTEX EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Organochlorine Pesticides EPA Method# 8081
012/004-015 S-8a	3 - 6"	1/20/2005	PM	Soil				1								X
016 S-8b	9 -12"		PM					1								HOLD
017 S-9a	3 - 6"		PM					1								X
018 S-9b	9 -12"		PM					1								HOLD
019 S-10a	3 - 6"		PM					1								X
020 S-10b	9 -12"		PM					1								HOLD
021 S-11a	3 - 6"		PM					1								X
022 S-11b	9 -12"		PM					1								HOLD
023 S-12a	3 - 6"		PM					1								X
024 S-12b	9 -12"		PM					1								HOLD
025 S-13a	3 - 6"		PM					1								X
026 S-13b	9 -12"		PM					1								HOLD
027 S-14a	3 - 6"		PM					1								X
028 S-14b	9 -12"		PM					1								HOLD

RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.)	1/21/05 1447		1/21/05 1447
2.)	1/21/05 1553		1/21/05 1600
3.)			
4.)			
5.)			

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.
- Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

- Please HOLD deeper samples "b" for possible later analysis.

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Environmental Review Inital Study
ATTACHMENT 4, 3 of 12
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Wastgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: Begonia Gardens DDT / 24038

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Jered Chaney / Josh Hannaleck

Date: 1/20/2005

LABORATORY: Entech

TURNAROUND TIME: (Standard Five-Day) 48hr Rush 72hr Rush

GLOBAL I.D.: --

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS — Total Petroleum Hydrocarbons: TPH-Diesel	Total Recoverable Petroleum Hydrocarbons	TPH-Gasoline by EPA Method GC-MS	Volatile Organics: Fuel Oxygenates & BTEX EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Organochlorine Pesticides EPA Method# 8081
[illegible]-029 S-15a	3 - 6"	1/20/2005	AM	Soil				1								X
030 S-15b	9 -12"	↓	AM	↓				1								HOLD
031 S-16a	3 - 6"		AM					1								X
032 S-16b	9 -12"		AM					1								HOLD
033 S-17a	3 - 6"		AM					1								X
034 S-17b	9 -12"		AM					1								HOLD
035 S-18a	3 - 6"		AM					1								X
036 S-18b	9 -12"		AM					1								HOLD
037 S-19a	3 - 6"		AM					1								X
038 S-19b	9 -12"		AM					1								HOLD
039 S-20a	3 - 6"		AM					1								X
040 S-20b	9 -12"		AM					1								HOLD
041 S-21a	3 - 6"		AM					1								X
042 S-21b	9 -12"	↓	AM	↓				1								HOLD

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)
1.) [signature]	1/21/05 1447	→	[signature]	1/21/05 1447	Ambient (Refrigerated) Frozen
2.) [signature]	1/21/05 1533	→	[signature]	1/21/05 1600	Ambient Refrigerated Frozen
3.)		→			Ambient Refrigerated Frozen
4.)		→			Ambient Refrigerated Frozen
5.)		→			Ambient Refrigerated Frozen

NOTES:

- ☐ If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- ☐ For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.
- ☐ Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

- Please HOLD deeper samples "b" for possible later analysis.

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1 of 1

Environmental Review Inital Study
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APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: Begonia Gardens DDT / 24038

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Jered Chaney / Josh Hannaleck

Date: 1/20/2005

LABORATORY: Entech

TURNAROUND TIME: (Standard Five-Day) 48hr Rush 72hr Rush

GLOBAL I.D.: --

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS – Total Petroleum Hydrocarbons: TPH-Diesel	Total Recoverable Petroleum Hydrocarbons	TPH-Gasoline by EPA Method GC-MS	Volatile Organics: Fuel Oxygenates & BTEX EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Organochlorine Pesticides EPA Method# 8081
12102-043 S-22a	3 - 6"	1/20/2005	AM	Soil				1								X
044 S-22b	9 -12"	↓	AM	↓				1								HOLD
045 S-23a	3 - 6"	↓	AM	↓				1								X
046 S-23b	9 -12"	↓	AM	↓				1								HOLD
047 S-24a	3 - 6"	↓	AM	↓				1								X
048 S-24b	9 -12"	↓	AM	↓				1								HOLD
049 S-25a	3 - 6"	↓	AM	↓				1								X
050 S-25b	9 -12"	↓	AM	↓				1								HOLD

RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)
1.) [signature]	1/21/05 1447	→	[signature]	1/21/05 1447	Ambient (Refrigerated) Frozen
2.) [signature]	1/21/05 1553	→	[signature]	1/21/05 1600	Ambient Refrigerated Frozen
3.)		→			Ambient Refrigerated Frozen
4.)		→			Ambient Refrigerated Frozen
5.)		→			Ambient Refrigerated Frozen

NOTES:

- ☐ *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*
- ☐ *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*
- ☐ *Please use MDL (Minimum Detection Limit) for any diluted samples.*

ADDITIONAL COMMENTS

- Please HOLD deeper samples "b" for possible later analysis.

J:\Fieldlog\FORMS.xls - COC

Environmental Review Inital Study
ATTACHMENT 4 39 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408)588-0201

Jered Chaney
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: **42102 - 2/1/2005 10:57:22 AM**

Order **Number: 42102**
Project Name: Begania Gardens **DDT**
Project Number: 24038

Date Received: **1/21/2005 4:33:40 PM**
P.O. Number: **23038**

Certificate of Analysis - Revision

On January **21,2005,** samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are **included:**

Matrix	Test	Method	Comments
Solid	EPA 8081A	**EPA** 8081A	

Case Narrative: Per ciient request report re-issued on 2/1/05 to change the Detection Limits for EPA 8081 from 0.05 mg/Kg to 0.025 mg/Kg.

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have **any** questions regarding **this** report, please call us at 408-588-0200 ext. *225.*

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Environmental Review Inital Study
ATTACHMENT 4 of 12/
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab # : 42102-001 **Sample ID:** S-la **Matrix:** Solid **Sample Date:** 112012005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limil	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Gamma-BHC (Lindane)	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Beta-BHC	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Heptachlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	0 11262005	PS6280A
delta-BHC	ND		I	0.025	mg/Kg	0112112005	PS6280A	01/26/2005	PS6280A
Aldrin	ND		i	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Heptachlor Epoxide	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Endosulfan I	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
4,4'-DDE	0.21		1	0.025	mg/Kg	0112112005	PS6280A	01/26/2005	PS6280A
Dieldrin	0.085		1	0 025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Endrin	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	0 112612005	PS6280A
4,4'-DDD	0.17		i	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Endosulfan II	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
4,4'-DDT	ND		i	0 025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Endosulfan Sulfate	ND		i	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Methoxychlor	ND		i	0.025	mg/Kg	01/21/2005	PS6280A	01/26/2005	PS6280A
Endrin Ketone	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	0112612005	PS6280A
Toxaphene	ND		i	0.1	mg/Kg	01/21/2005	PS6280A	0112612005	PS6280A
Chlordane (technical)	ND		I	0.1	mg/Kg	0112112005	PS6280A	0 112612005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	85 0	37 - 129

Analyzed by Mtran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 6, 41 of 121
APPLICATION 05-0269

Detection Limit = Detection Limil for Reporting.
DF = Diiution andlor Prep Factor including sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

2/1/2005 10 53:00 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab#: 42102-003 **Sample ID:** S-2a **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND			0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	57.0	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Initial Study
ATTACHMENT 8, 42 of 121
APPLICATION

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Dstection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

2/1/2005 10:53:02 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Prqject Number: 24038
Prqject Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab#: 42102-005 Sample ID: S-3a Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Gumma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A
Heptachlor	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
delta-BHC	ND		1	0.02s	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A
Aldrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan I	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDE	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Dieldrin	ND		1	0025	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDD	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/24/2005	PS6280A
4,4'-DDT	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin Aldehyde	ND		1	0 025	mg/Kg	0112112005	PS6280A	0112412005	PS6280A
Endosulfan Sulfate	ND		1	0 025	mg/Kg	0112112005	PS6280A	01/24/2005	PS6280A
Methoxychlor	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Toxaphene	ND		1	0 1	mg/Kg	0112112005	PS6280A	01/24/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	97.8	37 - 129

Analyzed by Mtran
Reviewed by GGUECRGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 43 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:05 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

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120 Westgate Drive
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Attn: Jered Chaney

Project **Number:** 24038
Project **Name:** Begonia Gardens DDT
Date Received: 1/21/2005
P.O. **Number:** **24038**
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-007 **Sample ID: S-4a** **Matrix:** Solid **Sample Date:** 1/20/2005

Method EPA 8081A - Organochlorine **Pesticides by Gas Chromatography**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Dale	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	UD		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	UD		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	0.091		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		I	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Endrin	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	0.25		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan ii	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	0,033		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin **Aldehyde**	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	012512005	PS6280A
Endosulfan Sulfate	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280.4	01/25/2005	PS6280A
Toxaphene	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	103	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 9, 44 of 101
APPLICATION 05-0269

Detection Limit = Detection Limit for **Reponing,**
DF = Dilution and/or Prep **Factor including** sample volume adjustments.
ND = Not Detected at or **above the** Detection **Limit.**

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: .Client

Certificate of Analysis - Data Report

Lab#: 42102-009 **SampleID:** S-5a **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280.4
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	0.10		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	0.13		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	0.046		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	86.9	31 - 119

Analyzed by: MUM
Reviewed by: GGUEORGUIEVA

Environmental Review Initial Study
ATTACHMENT 8, 45 of 121
APPLICATION 05-0265

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:10 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, *CA 95076*
Attn: Jered **Chaney**

Prqject Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: **24038**
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab # : 42102-01 1 Sample ID: S-6a **Matrix:** Solid Sample Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Cas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND			0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Gamma-BHC (Lindane)	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Bets-BHC	ND		i	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
delta-BHC	ND		I	0.025	mg/Kg	0ii21/2005	PS6280A	01/24/2005	PS6280A
Aldrin	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor Epoxide	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan I	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDE	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Dieldrin	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDD	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan II	ND		i	0,025	mg/Kg	01121/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDT	NO		I	0.025	mg/Kg	0112112005	PS6280A	01/24/2005	PS6280A
Endrin Aldehyde	ND		I	0.025	mg/Kg	01121/2005	PS6280A	01/24/2005	PS6280.4
Endosulfan Sulfate	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Methoxychlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A
Endrin Ketone	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Toxaphene	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Chlordane (technical)	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	94.3	37 - 129

Analyzed by Mtran
Reviewed by GGUEORGUIEVA

Environmental Review inital Study

ATTACHMENT - APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.

ND = Nor Detected at or above the Detection Limit.

2/1/2005 10:53:12 AM .GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, **CA 95054** **Phone: (408)588-0200** Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA **95076**
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-013 SampleID: S-7a Matrix: Solid Sample Dare: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gar Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	0112112005	PS6280A	0112512005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01125'2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		1	0.025	mg/Kg	11112112005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
4,4'-DDD	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4.4'-DDT	0.049		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	0112 112005	PS6280A	0112512005	PS6280A
Endosulfan Sulfate	0.11		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	0 1,2512005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	95.6	37	129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 47 R 1/21
APPLICATION 05-0269

Detection Limit = Detection Limit for **Reporting.**
DF = Dilution and/or Prep Factor including **sample** volume adjustments.

ND = Not Detected at or **above** the Detection Limit.

2/1/2005 10:53:14 AM - GGueorguieva

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3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 -Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-015 SampleID: S-8a **Matrix: Solid** **Sample Date:** 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Beta-BHC	0.070		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
delta-BHC	ND		1	0.325	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDE	0.17		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Dieldrin	0.072		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDD	0.25		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDT	0.077		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	95.3	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 48 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Prqject Number: 24038
Project Name: Begonia Gardens DDT
Date Received 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab# : 42102-017 **SampleID: S-9a** **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081.4 - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Bitch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		1	*0,025*	mg/Kg	01/21/2005	PS6280A	*011251200:*	PS6280A
Dieldrin	ND		1	0025	mg/Kg	01/21/2005	PS6280A	*011251200:*	PS6280A
Endrin	ND		I	0 025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	a1/25/2005	PS6280A
4,4'-DDT	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	*011251200:*	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	011251200:	PS6280A
Endrin Ketone	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	*011251200:*	PS6280A
Toxaphene	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	94.4	37 - 12Y

Analyzed by: Mtran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 49 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit far **Reporting.**
DF = Dilution and/or Prep Factor **including sample volume** adjustments.

N D = Not Detected at or **above the** Detection Limit.

2/1/2005 10:53 17 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, **Santa Clara, CA 95054** **Phone: (408)588-0200** **Fax: (408)588-0201**

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered **Chaney**

Project Number: **24038**
Prqject Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab#: 42102-019 **SampleID: S-10a** Matrix: Solid Sample Date: 1/20/2005

Method: CPA **8081A - Organochlorine Pesticides** by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limil	Units	Prep Date	Prep Batch	Analysis Data	QC Batch
Alpha-BHC	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	NU		I	ti 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		I	ti c25	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		I	*0.025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		I	*0.025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		I	*0.025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		I	*0.025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		I	*0,025*	mg/Kg	01/21/2005	PS6280A	0 1/25/2005	PS6280A
4,4'-DDD	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	NO		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		I	*0 025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		I	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	106	37 - 129

Analyzed by. **Miran**
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 50 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporing.
DF = Dilution and/or Prep Factor **including** sample volume adjustments.

ND = Not Detected at or above the Detection Limir.

2/1/2005 10:53:19 AM - GGueorguieva

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Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Dale Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab# : 42102-021 **SampleID: S-11a** **Matrix: Solid** **Sample Date:** 1/20/2005

Method: EPA 8081.4 - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	0.051		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	0.048		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	0.075		1	0.025	mg/Kg	01121/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	ND		1	0.025	mg/Kg	01121'2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	0.096		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	0.18		1	0.025	mg/Kg	01121/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	90.9	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEGRGUIEVA

Environmental Review Inital Study
ATTACHMENT 8L 5 of 12/21
APPLICATION 05-0269

Detection Limit = Detection Limit far Reporing.
DF = Dilution andlor Prep Factor including sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:22 AM - GGueorguieva

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120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: **24038**
Project **Name:** Begonia Gardens DDT
Date Received **1/21/2005**
P.O. Number: **24038**
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-023 **Sample ID: S-12a** **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081A - Organochlorine **Pesticides** by **Gas Chromatography**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	0112112005	PS6280A	0112512005	PS6280A
Aldrin	ND		1	0.125	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	0.060		1	0.025	mg/Kg	01/21/2005	PS6280A	01,2512005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	87.4	37 - 129

Analyzed by Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital **Study**
ATTACHMENT 4 - 52 of 121
APPLICATION 05-0262

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or **Prep Factor** including **sample volume adjustments**

ND = Not Detected **at or above** the Detection Limit.

2/1/2005 10:53:24 AM - GGueorguieva

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3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Prqject Number: **24038**
Project Name: **Begonia** Gardens DDT
Date Received: **1/21/2005**
P.O. Number: **24038**
Sample Collected **by:** Client

Certificate of Analysis - Data Report

Lab#: 42102-025 **Samole ID: S-13a** **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EI'A 8081A .Organochlorine Pesticides by Cas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Beta-BHC	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor	ND		1	0025	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A
delta-BHC	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Aldrin	NU		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor Epoxide	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan I	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDE	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Dieldrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDD	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan II	NU		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDT	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin Aldehyde	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan Sulfate	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	0 112412005	PS6280A
Methoxychlor	NU		1	0 025	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A
Endrin Ketone	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	0 1124,2035	PS6280A
Toxaphene	NU		1	0.1	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	95.6	37 - 129

Analyzed by: Mtran
Reviewed by GGUEORGUIEVA

Environmentai Review Inital Study
ATTACHMENT 8, 5 3 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

2/1/2005 10:53:25 AM - GGueorguieva

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Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-027 **Sample ID:** S-14a **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	0112132005	PS6280A	01/25/2005	PS6280.A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	0112132005	PS6280A	01/25/2005	PS6280A
Bern-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		i	0.025	mg/Kg	01/2 112005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01'2112005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		I	0,025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	NU		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	NV		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	0112112005	PS6280A	0112512005	PS6280A
4,4'-DDD	ND		I	0 025	mg/Kg	0 i121/2005	PS6280A	0112512005	PS6280A
Endosulfan II	ND		I	0.025	mg/Kg	0112112005	PS6280A	0112512005	PS6280A
4,4'-DDT	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Endrin Aideliyde	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		I	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	0 112 11200s	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	100	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 91 54 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above tile Detection Limil.
DF = Dilution and/or Prep Factor including sample volume adjustments.

2/1/2005 10:53:27 AM - GGueorguieva

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Watsonville, CA 95076
Attn. Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number. 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 42102-029 Sample ID: S-15a Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2305	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	0.043		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01125,2005	PS6280A
4,4'-DDD	0.047		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280.4
4,4'-DDT	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	ES6280.4
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	88.6	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 55 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:29 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA **95054** Phone: (408) 588-0200 **Fax:** (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab#: 42102-031 SampleID: S-16a Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	3.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.02s	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	0 037		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	ND			0 1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	0 1125,2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	95.0	37 - 12Y

Analyzed by: Mtran
Reviewed by. GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, Sheet 1 of 21
APPLICATION 05-0269

Detection Limit = Detection Limit for **Reporting.**
ND = Not Detected **at** or above the Detection Limit.
DF = Dilution and/or **Prep Factor** including sample volume adjustments.

2/1/2005 10:53 31 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201.

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, C.4 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 42102-033 Sample ID: **S-17a** **Matrix:** Solid **Sample** Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Beta-BHC	ND		1	0 C25	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
delta-BHC	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Aldrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDE	0 064		1	0025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Dieldrin	0034		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin	ND		1	0,025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDD	0 035		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan II	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
4,4'-DDT	0 14		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endrin Aldehyde	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Endosulfan Sulfate	0 16		1	0.025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	0112112005	PS6280A	01/24/2005	PS6280A
Endrin Ketone	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Toxaphene	ND		1	0 :	mg/Kg	01/21/2005	PS6280A	01/24/2005	PS6280A
Chlordane (technical)	ND		1	01	mg/Kg	01/21/2005	PS6280A	0112412005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	103	31 - 129

Analyzed by Muan
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 57 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Diiution and/or Prep Factor including sample volume adjustments.
NU = Not Detected at or above *fhc* Detection Limit.

2/1/2005 10:53:35 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

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120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-035 **Sample ID:** S-18a **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	NU		1	0.025	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Bels-BHC	0.10		1	0.025	mg/Kg	01/21/2005	PS6280A	C1/25/2005	PS6280A
Heptachlor	ND		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor **Epoxide**	ND		1	3025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan i	ND		1	0 025	mg/Kg	0112112005	PS6280A	01'2512005	PS6280A
4,4'-DDE	0 19		1	*0.025*	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Dieldrin	0.032		I	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	*0 025*	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
4,4'-DDD	1 4		10	*0 25*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	**3.8**		10	***0.25***	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Note: 4,4'-DDD and 4,4'-DDT were analyzed on **01/25/05** at ten fold dilution. Surrogate recovery for Decachlorobiphynol was 113.1%.									
Endrin Aldehyde	ND		1	*0 025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	0 029		I	*0.025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		I	*0.025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	0 325	mg/Kg	0112112005	PS6280A	01/25/2005	PS6280A
Toxaphene	NU		1	0.1	mg/Kg	01/21/2005	PS6280A	0112512005	PS6280A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	94.2	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental **Review** Inital **Study**
ATTACHMENT 5, 58 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.

ND = Not Detected at *or* above the Detection Limit.

2/1/2005 10:53:37 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa **Clara, CA 95054** **Phone: (408)588-0200** **Fax: (408)588-0201**

Weber, Hayes **and** Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab #: 42102-037 Sample ID: **S-19a** Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides **by** Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0 025	mg/Kg	01/21/2005	PS6280.4	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	0.086		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	0 056		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Aldrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor **Epoxide**	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	0 11		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	0 16		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	0.54		2	0.05	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Note: 4,4'-DDD was analyzed on 01/27/05 at two fold dilution Surrogate recovery far Decachlorobiphynol was 88.4%									
Endosulfan II	**ND**		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	0.10		1	0,025	mg/Kg	01/21/2005	PS6280A	03/25/2005	PS6280A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Methoxychlor	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	0111512005	PS6280A
Endrin Ketone	ND		1	0 325	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Toxaphene	**ND**		1	0 1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	**0.26**		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control **Limits** (%)
Decachlorobiphenyl	78.1	37 - 129

Analyzed by. Mtran
Reviewed by, GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 6, 59 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
Df = Dilution and/or Prep Factor including sample volume adjustments.

ND = Nor Detected at or **above the** Detection Limit,

2/1/2005 10:53:39 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate **Drive**
Watsonville, **CA** 95076
Attn: Jered Chaney

Project Number: **24038**
Project Name: Begonia Gardens DDT
Date Received: **1/21/2005**
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab# : 42102-039 SampleID S-20a Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	**0,025**	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Gamma-BHC (Lindane)	ND		1	**0.025**	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Beta-BHC	ND		1	**0 025**	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor	NU		1	*0 025*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
delta-BHC	*ND*		1	0.025	mg/Kg	01/21/2005	PS6280A	Oil2512005	PS6280A
Aldrin	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Heptachlor Epoxide	ND		1	**0** 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan I	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDE	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Dieldrin	ND		1	**0.025**	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin	NU		1	**0.025**	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDD	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endosulfan II	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
4,4'-DDT	ND		1	0025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin **Aldehyde**	ND		1	0 025	mg/Kg	01/21/2005	PS6280A	**0112512005**	PS6280A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	**01**/25/2005	PS6280A
Methoxychlor	ND		1	0.025	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Endrin Ketone	ND		1	**0,025**	mg/Kg	01/21/2005	PS6280A	*0112512005*	PS6280A
Toxaphene	ND		1	0.1	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A
Chlordane (technical)	ND		1	*0.1*	mg/Kg	01/21/2005	PS6280A	01/25/2005	PS6280A

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	88.1	37 - 129	

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 6, 60 of 121
APPLICATION 05-0269

'Detection Limit = Detection Limil **far** Reporting.
DF = Dilution **andlor** Prep **Factor** including **sample** volume adjustments.

ND = Not Detected at or **above** the Detection Limit.

2/1/2005 10:53:42 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab#: 42102-041 **Sample ID: S-21a** **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EP.4 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Beta-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Heptachlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
delta-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281.4
Aldrin	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	0112612005	PS6281A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endosulfan I	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
4,4'-DDE	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Dieldrin	ND		1	0.025	mg/Kg	01/24/2005	PS6281.4	01/26/2005	PS6281A
Endrin	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	0112612005	PS6281A
4,4'-DDD	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endosulfan II	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
4,4'-DDT	0.062		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Methoxychlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endrin Ketone	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	0112612005	PS6281A
Toxaphene	ND		1	0.1	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Chlordane (technical)	ND		1	0.1	mg/Kg	0112412005	PS6281A	01/26/2005	PS6281A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	100	37 - 129

Analyzed by Mtran
Reviewed by. GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 6, 61 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limii.

2/1/2005 10:51:44 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: **24038**
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-043 **Sample ID:** S-22a **Matrix:** Solid **Sample Date:** 1/20/2005

Methad: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Beta-BHC	0.055		1	0.025	mg/Kg	0112412005	PS6281A	01/26/2005	PS6281A
Heptachlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
delta-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Aldrin	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endosulfan I	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
4,4'-DDE	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Dieldrin	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endrin	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
4,4'-DDD	ND		1	0.025	mg/Kg	0112412005	PS6281A	0112612005	PS6281A
Endosulfan II	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
4,4'-DDT	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endrin Aldehyde	ND		1	0.025	mg/Kg	01/24/2005	PS6281.4	01/26/2005	PS6281A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Methoxychlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Endrin Ketone	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A
Toxaphene	ND		1	0.1	mg/Kg	01~2412005	PS6281A	01/26/2005	PS6281A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/24/2005	PS6281A	01/26/2005	PS6281A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	81.3	37 - 129

Analyzed by: Miran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 62 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for **Reporting.**
DF = Dilution and/or **Prep Factor including sample volume adjustments.**
ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:46 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 **Fax: (408) 588-0201**

Weber, Hayes **and Associates**
120 Westgate **Drive**
Watsonville, CA 95076
Attn: Jered **Chaney**

Project **Number: 24038**
Project Name: Begonia Gardens DDT
Date Received: 112112005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab# : 42102-045 **SampleID S-23a** **Matrix:** Solid **Sample** Date: 1/20/2005

Method: EPA 8081.4 - **Organochlorine Pesticides by Gas** Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	012412005	PS6281A	01/28/2005	PS6281A
Beta-BHC	0.14		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Heptachlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
delta-BHC	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	0312812005	PS6281A
Aldrin	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Heptachlor Epoxide	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	0132812005	PS6281A
Endosulfan I	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
4,4'-DDE	0.11		1	0 025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Dieldrin	0.082		1	0.025	mg/Kg	01/24/2005	PS6281A	012812005	PS6281A
Endrin	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
4,4'-DDD	0.55		2	0.05	mg/Kg	011241200:	PS6281A	01/28/2005	PS6281A
Note: 4,4'-DDD was analyzed on 01/28/05 at two fold dilution. Surrogate recovery for Decachlorobiphynol was 109 4%.									
Endosulfan II	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
4,4'-DDT	0 20		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endrin Aldehyde	ND		1	0.025	mg/Kg	011241200?	PS6281A	01/28/2005	PS6281.4
Endosulfan Sulfate	0.037		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Methoxychlor	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endrin Ketone	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Toxaphene	ND		1	0.1	mg/Kg	01/24/2035	PS6281A	01/28/2005	PS6281A
Chlordane (technical)	ND		1	0.1	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	89.4	37 - 129

Analyzed by: MTran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 6, 63 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit **for Reporting.**
DF = Dilution **and/or Prep Factor** including **sample volume adjustments.**
ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:48 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab# : 42102-047 Sample ID: S-24a Matrix: **Solid** **Sample Date: 112012005**

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flng	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Gamma-BHC (Lindane)	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Beta-BHC	0.029		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Heptachlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
delta-BHC	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Aldrin	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	0.112412005	PS6281A	0112812005	PS6281A
Endosulfan I	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
4,4'-DDE	0.21		1	0.025	mg/Kg	01/24/2005	PS6281A	0.112812005	PS6281A
Dieldrin	0.18		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endrin	ND			0.025	mg/Kg	01124,2005	PS6281A	0112812005	PS6281A
4,4'-DDD	0.28		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endosulfan II	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
4,4'-DDT	0.060		1	0.325	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endrin Aldehyde	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	0112412005	PS6281A	012812005	PS6281A
Methoxychlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endrin Ketone	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Toxaphene	ND		1	0.1	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Chlordane (technical)	0.18		1	0.1	mg/Kg	01/24/2005	PS6281A	0112812005	PS6281A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	92.3	37 - 129

Analyzed by: MTran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 64 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments,

ND = Not Detected at or above the Detection Limit.

2/1/2005 10:53:51 AM - GGueorguieva

Entech Analytical Labs, Inc.
3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Solid

Prep Batch ID: PS6281A **Reviewed by** GGUEORGUIEVA- 01/28/05 **QC Batch ID:** PS6281A

Prep Date: 1/24/2005 **Analysis Date:** 1/26/2005

LCS **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0 11	LCS	1/26/2005	113			25 - 160
Aldrin	<0.006	0.1	0.098	LCS	1/26/2005	97.9			42 - iz2
Dieldrin	<0.003	0.1	0 10	LCS	1/26/2005	104			36 - 146
Endrin	<0.003	0.1	0 10	LCS	1/26/2005	101			30 - 147
Gamma-BHC (Lindane)	<0 006	0.1	0 10	LCS	1/26/2005	102			32 - 127
Heptachlor	<0.006	0.1	010	LCS	1/26/2005	101			34-11!

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	108	37 - 129

LCSD **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.11	LCSD	1/26/2005	114	0.88	30.0	25 - 160
Aldrin	<0 006	0 1	0 11	LCSD	1/26/2005	105	7.4	30.0	42.122
Dieldrin	<0 003	0.1	0 11	LCSD	1/26/2005	106	2.7	30 0	36 - 146
Endrin	<0.003	0.1	0.094	LCSD	1/26/2005	93.9	7.4	30 0	30 - 147
Gamma-BHC (Lindane)	<0 006	0.1	0.11	LCSD	1/26/2005	109	6.2	30.0	32 - 127
Heptachlor	<0 006	0.1	0.11	LCSD	1/26/2005	107	6.6	30.0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	115	37 - 129

Environmental Review Inital Study
ATTACHMENT 8, 65 of 121
APPLICATION 05-0269

Entech Analytical labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: **(408)588-0200** Fax: (408) **588-0201**

Quality Control - Laboratory Control Spike / Duplicate Results

Solid

Prep Batch ID: PS6280A Reviewed by: GGUEGRGUIEVA - 01/28/05 **QC Batch ID: PS6280A**

Prep Date: 1/21/2005 **Analysis Date: 1/21/2005**

LCS **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPU	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.099	LCS	11211200s	99.0			25 - 160
Aldrin	<0.006	0.1	0.10	LCS	112112005	103			42 - 122
Dieldrin	<0.003	0.1	0.10	LCS	1/21/2005	103			36 - 146
Endrin	<0.003	0.1	0.092	LCS	1/21/2005	92.3			30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0.10	LCS	1/21/2005	104			12 - 127
Heptachlor	<0.006	0.1	0.10	LCS	1/21/2005	101			34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	114	37 - 129

LCSD **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Ami	SpikeResult	QC Typo	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.095	LCSD	1/21/2005	94.5	4.7	30.0	25 - 160
Aldrin	<0.006	0.1	0.097	LCSD	1/21/2005	97.1	5.6	30.0	42 - 121
Dieldrin	<0.003	0.1	0.099	LCSD	1121'2005	99.4	4.0	30.0	36 - 146
Endrin	<0.003	0.1	0.086	LCSD	1/21/2005	86.3	6.7	30.0	30 - 147
Gamma-QHC **(Lindane)**	<0.006	0.1	0.10	LCSD	112112005	89.9	3.9	30.0	32 - 127
Heptachlor	<0.006	0.1	0.098	LCSD	112112005	97.6	3.7	30.0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	109	37 - 129

Environmental Review Inital Study

ATTACHMENT 5 1/21/
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, **CA 95054** **Phone: (408) 588-0200** **Fax: (408)588-0201**

Quality **Control** -Method Blank

Solid

Prep Batch ID: PS6280A Validated by GGUEORGUIEVA - 01/28/05 ***QC*** **Batch ID: PS6280A**

Prep Date: 1/21/2005 **Analysis Date: 1/21/2005**

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	I	0.025	mg/Kg
4,4'-DDE	ND	I	0 025	mg/Kg
4,4'-DDT	ND	I	0.025	mg/Kg
Aldrin	ND	I	0.025	mg/Kg
Alpha-BHC	ND	I	0 025	mg/Kg
Beta-BHC	ND	I	0 025	mg/Kg
Chlordane (technical)	ND	I	0.1	mg/Kg
delta-BHC	ND	I	a 025	mg/Kg
Dieldrin	ND	I	0.325	mg/Kg
Endosulfan I	ND	I	0.025	mg/Kg
Endosulfan II	ND	I	0.025	mg/Kg
Endosulfan **Sulfate**	ND	I	0.025	mg/Kg
Endrin	ND	I	0 025	mg/Kg
Endrin Aldehyde	ND	I	0.025	mg/Kg
Endrin Ketone	ND	I	0.025	mg/Kg
Gamma-BHC (Lindane)	ND	1	0 025	mg/Kg
Heptachlor	ND	I	0.025	mg/Kg
Heptachlor **Epoxide**	ND	I	0.025	mg/Kg
Methoxychlor	ND	I	0.025	mg/Kg
Toxaphene	ND	I	0.1	mg/Kg

Surrogate for Blank	% Recovery	Control Limiir
Decachlorobiphenyl	105	17 - 129

Environmental Review Inital Study
ATTACHMENT 6, 6 of 12/
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-049 Sample ID: S-25a Matrix: Solid Sample Date: 1/20/2005

Method EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Alpha-BHC	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Gamma-BHC (Lindane)	ND		1	0.02s	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Beta-BHC	0 084		1	0 025	mg/Kg	01124,2005	PS6281A	01/28/2005	PS6281A
Heptachlor	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
delta-BHC	011		1	0 025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Aldrin	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Heptachlor Epoxide	ND		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endosulfan I	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	0112812005	PS6281A
4,4'-DDE	0 20		1	0 025	mg/Kg	01/24/2005	PS6281A	0112812005	PS6281A
Dieldrin	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Endrin	ND		1	0025	mg/Kg	01/24/2005	PS6281A	0112812005	PS6281A
4,4'-DDD	0 26		1	0.025	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281.4
Endosulfan II	ND		1	0 025	mg/Kg	01/24/2005	PS6281A	0112812005	PS6281A
4,4'-DDT	3.0		10	0.25	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Note: 4,4'-DDT was analyzed on 01/28/05 PI ten fold dilution. Surrogate recovery for Decachlorobiphynol was 124.5%									
Endrin Aldehyde	ND		1	0 025	mg/Kg	0112412005	PS6281A	0112812005	PS6281A
Endosulfan Sulfate	ND		1	0.025	mg/Kg	0112412005	PS6281.A	01/28/2005	PS6281A
Methoxychlor	ND		1	0.025	mg/Kg	0112412005	PS6281A	01/28/2005	PS6281A
Endrin Ketone	ND		1	0.025	mg/Kg	01121112005	PS6281A	0 112812005	PS6281.4
Toxaphene	ND		1	** I	mg/Kg	01/24/2005	PS6281A	01/28/2005	PS6281A
Chlordane (technical)	0.27		i	0.1	mg/Kg	0112412005	PS6281A	01,2812005	PS6281A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	94.5	37 - 129

Analyzed by: MTran
Reviewed by GGUEORGUIEVA

Environmental Review Initai study
ATTACHMENT 8, 68 rec'd 2/1
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

2/1/2005 10:53:53 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Solid

Prep Batch ID: PS6281A Validated by, GGUEORGLIEVA - *01128105* **QC Batch ID:** PS6281A

Prep Date: 1/24/2005 **Analysis Date:** 1/26/2005

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	PQLR	Units
4.4-DDU	ND	I	0 025	mg/Kg
4,4'-DDE	ND	I	0 025	mg/Kg
4,4'-DDT	ND	1	0 025	mg/Kg
Aldrin	ND	I	0 025	mg/Kg
Alpha-BHC	ND	I	0 025	mg/Kg
Beta-BHC	ND	I	0025	mg/Kg
Chlordane (technical)	ND	I	31	mg/Kg
delta-BHC	ND	I	0 025	mg/Kg
Dieldrin	ND	I	0 025	mg/Kg
Endosulfan I	ND	I	0 025	mg/Kg
Endosulfan II		I	0025	mg/Kg
Endosulfan Sulfate	ND	1	0 025	mg/Kg
Endrin	NU	I	0 025	mg/Kg
Endrin Aldehyde	ND	1	0 025	mg/Kg
Endrin Ketone	ND	1	0 025	mg/Kg
Gamma-BHC (Lindane:	ND	1	0025	mg/Kg
Heptachlor	NU	1	0 025	mg/Kg
Heptachlor Epoxide	ND	1	0 025	mg/Kg
Methoxychlor	NU	1	0 025	mg/Kg
Toxaphene	ND	1	0.1	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	113	37 - 129

Environmental Review lnital Study

ATTACHMENT 8, 69 of 121

APPLICATION 05-0269

Pat Hoban

From: "Pat Hoban" <pat@weber-hayes.com>
To: "(ENTECH) Simon Hague" <shague@entechlabs.com>
cc: "WHA-Jered Chaney" <jered@weber-hayes.com>
Sent: Tuesday, February 01, 2005 2:25 PM
Attach: begonia-soil-results.xls
Subject: Re: EDD tabulation & Request for additional lab testing

NO surcharge per SH.

Simon, Thanks for the MDLs Our client OKed analysis of the following 9 samples:

- 42102-002 (S-1b @ 9-12 inches) for Dieldren only
- 42102-016 (S-8b @ 9-12 inches) for Dieldren only
- 42102-022 (S-11b @ 9-12 inches) for Diedrin only
- 42102-032 (S-16b @ 9-12 inches) for Diedrin only
- 42102-034 (S-17b @ 9-12 inches) for Diedrin only
- **42102-036 (S-18b @ 9-12** inches) authorized **yesterday** by **email please test for DDT/DDE/DDD** + Diedrin only
- 42102-038 (S-19b @ 9-12 inches) for Diedrin only
- *42102-046* (S-23b @ 9-12 inches) for Diedrin only
- 42102-048 (S-24b @ **9-12** inches) for Diedrin only
- **42102-050 (S-25b @** 9-12 **inches)** authorized **yesterday by email -- please test ?orDDT/DDE/DDD only.**

The attached table has all the hits in case you want to cross reference.

Ran just picked up tho deeper samples in case these mid-level samples get hits

Thanks,

Pa: Hoban
Weber, Hayes & Associates
120 Westgate Drive, Watsonville, **CA** 95076
Phone: (831) 722-3580
www.weber-hayes.com

—— Original **Message** ——
From: &Hot$@~
To: L Glantz ; (ENTECH) Simon Hague
Cc: WHA-Jered Chaney
Sent: Monday, January 31, 2005 3:44 PM
Subject: EDD tabulation & Request for additional lab testing

Laurie, The EDD **was** great - saved a bunch ***of*** time From our end - attached table is what we slammed out with the EDD format – thanks.

Simon, Thanks *for* dealing with the emailable request. We'd **like** the following **two** samples analyzed:

- 42102-036 (S-18b @ 9-12 inches)
- 42102-050 (S-25b @ *9-12* **inches)**

I'll forward the deeper samples in case ***these*** **2 gel** cumulative hits greater than *1* mg/kg

All the best,

Environmental Review Inital **Study**
ATTACHMENT-8, 70 of 121
APPLICATION

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CHANGE ORDER FORM

Date Requested: 1-31-05
Workorder #: 42102
Date Needed: 2-3-05
Project Name or #: Bogfonice Gardens
Client: WWCl
Ordered by: Jeff Hobany

Laboratory ID#	Client ID#	Matrix	Change Requested
42102-~~035~~			~~Pesticides version on~~
~~-044~~			~~3-day TAT~~
-036			Add 8081/pesticides
-050			on 3-day TAT

Comments: No Surcharge

Date Test Added:
Test Added By:

Distribution:
Original in the Workorder Folder. Accounting **and** all **involved** departments must **get a** copy of this form.

F:\Change Crder Form.xls

Environmental Analysis Since 1983

Environmental Review Inital Study
ATTACHMENT 8, 71 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jered Chaney
Weber, Hayes and Associates
120 Westgate Drive
Watsonville: CA 95076

Certificate **ID: 42102 - 2/3/2005** 10:36:02 AM

Order **Number: 42102**
Project Name: Begonia Gardens **DD'I**
Project Number: **24038**

Date Received: 1/21/2005 4:33:40 PM
P.O. Number: **24038**

Certificate of Analysis - Additional Work

On January 21, 2004, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

	Test	Method	Comments
Solid	**EPA 8081A**	EPA 8081A	

Case Narrative: Per client request Detection Limits for EPA 8081 from 0.05 mg/Kg to 0.025 mg/Kg.

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346)
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Environmental Review Inital Study
ATTACHMENT 8, 72 of 121
APPLICATION 05-0269

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 35054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Walsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DD'I
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab#: 42102-002 **Sample ID: S-1b** **Matrix:** Solid **Sample Date:** 1/20/2005

Method: EPA 8081A / Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Direction Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	0 12		I	C.025	mg/Kg	02/01/2005	PS6283A	02/02/2005	PS6283A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	91.3	37 - 129

Analyzed by: MTran
Reviewed by: GGUEORGUIEVA

Lab#: 42102-016 **Sample ID: S-8b** **Matrix:** Solid Sample **Date:** 1/20/2005

Method: EI'A 8081A I Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dicldrin	ND		I	0.025	mg/Kg	02/01/2005	PS6283A	02/02/2005	PS6283A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	79 3	37 - 129

Analyzed by: MTran
Reviewed by. GGUEORGUIEVA

Lab # : 42102-022 **Sample ID: S-11b** **Matrix:** Solid **Sample Date:** 112012005

Method: **EPA** 8081A I Organochlorine Pesticides by Gas Chromatography

Parameter	Rcsult	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	ND		1	0.025	mg/Kg	02/01/2005	PS6283A	02/02/2005	PS6283A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	104	37 - 129

Analyzed by Miran
Reviewed by GGUEORGUIEVA

Lab # : 42102-032 **SampleID: S-16b** **Matrix:** Solid **Sample Date:** 1/29/2005

Method: EPA 8081A / Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	ND		1	0.025	mg/Kg	02/01/2005	PS6283A	02/02/2005	PS6283A

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	99.8	37 - 129

Analyzed by: Miran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
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Detection Limit = Detection Limit for Reporing.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit,

2/3/2005 10:05:24 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor **Court, Santa Clara, CA 95054** **Phone: (408)588-0200** **Fax: (408)588-0201**

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, **CA 95076**
Attn: **Jered** Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 112112005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 42102-034 **SampleID: S-17b** Matrix: Solid **Sample** Date: 1/20/2005

Method: CPA 8081A / Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Datr	QC Batch
Dieldrin	ND		1	0.025	mg/Kg	02/01/2005	PS6283A	02'0212005	PS6283A

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	99 9	37 - 129	

Analyzed by: MTran
Reviewed by: GGUEORGUIEVA

Lab #: 42102-036 Sample ID: S-18b Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A / Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
4,4'-DDE	ND		1	0.025	mg/Kg	01/31/2005	PS6281D	02/01/2005	PS6281D
Dieldrin	ND		1	0.025	mg/Kg	01/31/2005	PS6281D	02/01/2005	PS6281D
4,4'-DDD	ND		1	0.025	mg/Kg	01/31/2005	PS6281D	02/01/2005	PS6281D
4,4'-DDT	ND		1	0.025	mg/Kg	01/31/2005	PS6281D	02/01/2005	PS6281D

surrogate	*Surrogate Recovery*	Control Limits (%)	
Decachlorobiphenyl	103	37 - 129	

Analyzed by: MTran
Reviewed by: GGUEORGUIEVA

Lab#: 42102-038 Sample ID: **S-19b** Matrix: Solid **Sample** Date: 1/20/2005

Method: EPA 8081A / **Organochlorine** Pesticides by Gar Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	ND		1	*0.025*	mg/Kg	02/01/2005	PS6283A	02/02/2005	PS6283.4

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	93.5	37 - 129	

Analyzed by: MTran
Reviewed by: GGUEORGUIEVA

Lab # : 42102-046 **Samole** ID: S-23b Matrix: Solid Sample Date: 1/20/2005

Method: EPA 8081A / Organochlorine Pesticides by Gas Chromatography

parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	*0* 030		1	0 025	mg/Kg	02/01/2005	PS6283A	02/02/2005	PS6283A

surrogate	**Surrogate** Recovery	**Control** Limits (%)	
Decachlorobiphenyl	96 *8*	37 - 129	

Analyzed by MTran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
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Detection Limit = Detection Limil for Reporting.
DF = Dilution **andlor** Prep Factor inciuding sample volume **adjustments.**

ND = Not **Detected at or above** the Detection Limit.

2/3/2005 10:06:01 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Vietor-Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0304

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab # : 42102-048 **SampleID: S-24b** **Matrix: Solid** Sample **Date:** *112012005*

Method: EPA 8081A / Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Dale	Prep Batch	Analysis Date	QC Batch
Dieldrin	ND		10	**0.25**	mg/Kg	*0210112305*	PS6283A	02/02/2005	PS6283A

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	109	17 - 129	

Analyzed by: MTran
Reviewed by: GGUEORGUIEVA

Lab # : *42102-050* **SampleID: S-25b** **Matrix: Solid** **Sample Date:** 1/20/2005

Method: *EPA 8081A / Organochlorine Pesticides by Gas Chromatography*

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
4,4'-DDE	0.043		I	**0.02s**	mg/Kg	01/31/2005	PS6281D	**0210112005**	PS6281D
4,4'-DDD	0.11		I	**0,025**	mg/Kg	01/31/2005	PS6281D	**02101/2005**	PS6281D
4,4'-DDT	**0.48**		I	0.025	mg/Kg	01/31/2005	PS6281D	02/01/2005	PS6281D

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	104	37 - 129	

Analyzed by: MTran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
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APPLICATION 05-0269

Detection **Limit** = **Detection Limit** for Reporing.
DF = **Dilution andlor** Prep **Factor including sample volume adjustments.**

ND = Not **Detected** at or **above the Detection Limit.**

2/2/2005 10:06:11 AM - GGueorgueva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control -Method Blank
Solid

Prep Batch ID: PS6281D Validated by GGUEORGUIEVA - 02/01/05 **QC Batch ID:** PS6281D

Prep Date: 1/31/2005 **Analysis Date:** 2/1/2005

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	YQLR	Units
4,4'-DDD	ND	1	0025	mg/Kg
4,4'-DDE	ND	1	*0.025*	mg/Kg
4,4'-DDT	ND	1	*0.025*	mg/Kg
Aldrin	ND	1	0.025	mg/Kg
Alpha-BHC	ND	1	0025	mg/Kg
Beta-BHC	ND	1	*0 025*	mg/Kg
Chlordane (technical)	ND	1	0.1	mg/Kg
delta-BHC	ND	1	0.025	mg/Kg
Dieldrin	ND	1	0.023	mg/Kg
Endosulfan I	ND	1	0 025	mg/Kg
Endosulfan II	ND	1	0025	mg/Kg
Endosulfan Sulfate	ND	1	0.025	mg/Kg
Endrin	ND	1	0025	mg/Kg
Endrin **Aldehyde**	ND	1	0.025	mg/Kg
Endrin Ketone	ND	1	0.025	mg/Kg
Gamma-BHC (Lindane)	ND	1	0025	mg/Kg
Heptachlor	ND	1	0.025	mg/Kg
Heptachlor Epoxide	ND	1	0025	mg/Kg
Methoxychlor	ND	1	*0.025*	mg/Kg
Toxaphene	ND	1	0.1	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	**98.3**	**37 - 129**

Environmental Review inital Study
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Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408)588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Solid

Prep Batch ID: PS6281D Reviewed by: GGUEORGUIEVA - 02/01/05 **QC Batch ID:** PS6281D

Prep Date: 1/31/2005 **Analysis Date:** 211,2005

LCS **Method:** EPA 8081A **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	a 0 0 2	0.1	0.094	LCS	2/1/2005	93.8			25 - 160
Aldrin	<0.006	0.1	0.090	LCS	2/1/2005	89.8			42.122
Dieldrin	<0.003	0.1	0.093	LCS	2/1/2005	93.2			36 - 146
Endrin	<0 003	0.1	0 085	LCS	2/1/2005	84.7			30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0 094	LCS	2/1/2005	93.8			32 - 127
Heptachlor	<0.006	0.1	0.093	LCS	2/1/2005	92.8			14-11:

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	95	37 - 129

LCSD **Method:** EPA 8081A **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4.4'-DDT	<0.002	0.1	*0.098*	LCSD	2/1/2005	98.1	45	30 0	25 - 160
Aldrin	<0.006	0.1	0.087	LCSD	2/1/2005	***87.0***	3.2	30 0	42 - 122
Dieldrin	<0 003	0.1	0.091	LCSD	21112005	90.7	***2.5***	30.0	36 - 146
Endrin	<0 003	0.1	0087	LCSD	2/1/2005	**87.4**	**3. I**	30.0	30 - 147
Gamma-BHC (Lindane)	<0 006	0.1	*0.090*	LCSD	2/1/2005	90.1	4.0	30 0	32 - 127
Heptachlor	<0.006	0!	0.089	LCSD	2/1/2005	89.0	4.2	10 0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	97.8	37 - 129

Environmental Review Inital Study
ATTACHMENT 8, 77 of 121
APPLICATION 05-0269

QCReport .GGueorguieva - 2/3/2005 10:06:25 AM

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results
Solid

Prep Batch ID: PS6281D **Reviewed by** GGLEORGUIEVA- *02101105* **QC Batch ID:** PS6281D

Prep Date: 1/31/2005 **Analysis Date:** 2/1/2005

Method EPA 8081A

Cone. Units: mg/Kg

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Dale	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 42102-036									
4,4'-DDT	ND	0.10	0.101	MS	2/1/2005	101			25 - 160
Aldrin	ND	0 10	0.0731	MS	2/1/2005	73.1			42 - 122
Dieldrin	ND	*0* 10	0.0852	MS	2/1/2005	85.2			36 - 146
Endrin	ND	0 10	0.0914	MS	2/1/2005	91.4			10 - 147
Gamma-BHC (Lindane)	ND	0.10	0.0740	MS	21112005	74.u			12 - 127
Heptachlor	ND	*0* 10	0 0766	MS	2/1/2005	16.6			34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	102	37 - 129

MSD SampleNumber: 42102-036									
4,4'-DDT	ND	0.10	0 102	MSD	2/1/2005	IO?	1.0	30	25 - 160
Aldrin	ND	0.10	0.0791	MSD	2/1/2005	79.1	7.9	30	42 - 122
Dieldrin	ND	0.10	0 0945	MSD	21112005	94.5	10.4	30	36 - 146
Endrin	ND	0.10	0.0900	MSD	2/1/2005	90.0	1.5	30	30 - 147
Gamma-BHC (Lindane)	ND	0.10	0 0827	MSD	2/1/2005	82.7	11.1	30	32 - 127
Heptachlor	ND	0.10	0.0825	MSD	2/1/2005	82.5	7.4	*30*	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	98.6	37 - 129

Environmental Review Inital Study
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APPLICATION 05-0269

QCReport - GGueorgulieva - *21312005* 10:15:35 *AM*

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Quality Control - Method Blank

Solid

Prep Batch ID: PS6283A Validated by: GGUEORGUIEVA - 02/03/05 QC Batch ID: PS6283.A

Prep Date: 21112005 Analysis Date: 2/2/2005

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	1	*0.025*	mg/Kg
4,4'-DDE	ND	1	0.025	mg/Kg
4,4'-DDT	ND	1	*0.025*	mg/Kg
Aldrin	ND	1	0.025	mg/Kg
Alpha-BHC	ND	1	0.025	mg/Kg
Beta-BHC	ND	1	0.025	mg/Kg
Chlordane (technical)	ND	1	0.1	mg/Kg
dells-BHC	ND	1	*0.025*	mg/Kg
Dieldrin	ND	1	0.025	mg/Kg
Endosulfan I	ND	1	0.025	mg/Kg
Endosulfan II	ND	1	*0.025*	mg/Kg
Endosulfan Sulfate	ND	1	*0.025*	mg/Kg
Endrin	ND	1	0.025	mg/Kg
Endrin Aldehyde	ND	1	0.025	mg/Kg
Endrin Ketone	ND	1	0.025	mg/Kg
Gamma-BHC (Lindane)	ND	1	0.025	mg/Kg
Heptachlor	ND	1	0.025	mg/Kg
Heptachlor Epoxide	ND	1	0.025	mg/Kg
Methoxychlor	ND	1	*0.025*	mg/Kg
Toxaphene	ND	1	0.1	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	90.4	37 - 129

Environmental Review Inital Study
ATTACHMENT 8, 79 of 121
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Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results
Solid

Prep Batch ID: PS6283A Reviewed by GGUEORGUIEVA- **02/03/05** **QC Batch ID: PS6283A**

Prep Date: 2/1/2005 **Analysis Date: 2/2/2005**

LCS **Method: EPA 8081.4** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0 002	0.1	0.11	LCS	2/2/2005	112			25 - 160
Aldrin	<0.006	0.1	0 092	LCS	2/2/2005	92.0			42 - 122
Dieldrin	<0 003	0 1	0.10	LCS	2/2/2005	101			36 - 146
Endrin	<0 003	0 1	0.11	LCS	2/2/2005	106			30 - 147
Gamma-BHC (Lindane)	<0.006	0 1	0.094	LCS	2/2/2005	94.1			32 - 127
Heptachlor	<0.006	0 1	0.096	LCS	2/2/2005	YS.5			34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	108	37 - 129

LCSD **Method: EPA 8081A** Conc. **Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.11	LCSD	2/2/2005	106	5.5	30 0	25 - 160
Aldrin	<0.006	0.1	0.077	LCSD	2/2/2005	77.1	18	30 0	42 - 122
Dieldrin	<0 003	0.1	0.092	LCSD	2/2/2005	91.9	9.8	30.0	36 - 146
Endrin	<0.003	0.1	0 097	LCSD	2/2/2005	97.0	8.6	30.0	30- 147
Gamma-BHC (Lindane)	<0.006	0.1	0.079	LCSD	2/2/2005	78.6	18	30 0	32 - 127
Heptachlor	<0.006	0.1	0.079	LCSD	2/2/2005	79.1	19	30.0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	97	37 - 129

Environmental Review Inital Study

ATTACHMENT 8 EA 1121
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME AND JOB #: [illegible]

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates (Pat Hoban)

TURNAROUND TIME: ~~Normal~~ (circled) RUSH - Same Day

Sample ID# & Depth (sampler:_____)	Date Sampled	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS — Total Petroleum Hydrocarbons: Extractables as Diesel (w/-standard Silica-Gel-Cleanup)	Purgeable Fuel-Scan with MTBE-BTEX	Gasoline & BTEX-MTBE by EPA Method# 8015M-&-8020	Volatile Organics: MTBE by EPA Method# 8260	SOLVENTS by EPA Method# 8010	Additional Analysis — Organochlorine Pesticides by EPA Method 8081A: DDD, DDE & DDT	Dieldren
42102-051 S-1c 15-18"	Jan-20,-04		~~HOLD~~		x							X
S-8c 15-18"	Jan-20,-04		HOLD		x							
S-11c 15-18"	Jan-20,-04		HOLD		x							
S-17c 15-18"	Jan-20,-04		HOLD		x							
S-18c 15-18"	Jan-20,-04		HOLD		x							
S-19c 15-18"	Jan-20,-04		HOLD		x							X
-052 S-23c 15-18"	Jan-20,-04		~~HOLD~~		x							
S-24c 15-18"	Jan-20,-04		HOLD		x							
S-25c 15-18"	Jan-20,-04		HOLD		x							

RECEIVED BY:	Date & Time	RELEASED BY:	Date & Time	SAMPLE CONDITION: (circle 1)
1.) Sampler: [signature]	2/1/05 1404	[signature]	2/1/05 1404	Ambient Refrigerated (circled) Frozen
2.) [signature]	2/1/05 1517	[signature]	2/1/05 15:20	Ambient Refrigerated Frozen
3.)				Ambient Refrigerated Frozen
4.)				Ambient Refrigerated Frozen
5.)				Ambient Refrigerated Frozen

NOTES - Lab to complete the following if box is checked:

- [ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*
- [ ] For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.
- [ ] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

Additional Comments

NOTE: Samples on HOLD until results of shallow samples

– Please provide EDD fromat + .pdf by email.

– Thank you.

Environmental Review Inital Study
ATTACHMENT 8, 91 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jered Chaney
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: **42102 - 2/10/2005 10:00:28 AM**

Order Number: **42102**
Project **Name: Begonia Gardens** DDT
Project Number: **24038**

Date Received: 1/21/2005 4:33:40 PM
P.O. Number: 21038

Certificate of Analysis - Additional Work

On January 21, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Solid	EPA 8081A	EPA 8081A	

Case Narrative: Fer client request Detection Limits for EPA 8081 from 0.05 mg/Kg to 0.025 mg/Kg.

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California ($2346)
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely

Laurie Glantz-Murphy
Laboratory Director

Environmental Analysis Since 1983

Environmental Review Inital Study
ATTACHMENT 8, 82 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor *Court*, Santa Clara, CA 95054 Phone. (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate **Drive**
Watsonville, CA 95076
Attn: Jered **Chaney**

Project Number. 24038
Project Name: Begonia Gardens DDT
Date Received 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-051 **Sample ID: S-1c 15-18'** **Matrix:** Solid **'Sample** Date: 1/20/2005

Method: **EPA 8081A .Organochlorine Pesticides** by Cas **Chromatography**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	0 11		I	0 *025*	mg/Kg	02/03/2005	PS6283C	02/05/2005	PS6283C

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	97.3	34 - 129

Analyzed by: Mtran
Reviewed by GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 83 of 121
APPLICATION 05-0269

Detection **Limit = Detection Limit for Reporing.**
DF = Dilution and/or Prep Factor including *sample* volume adjustments.

ND = Not **Detected** at or above **the Detection Limit.**

2/10/2005 10:00:39 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Prqiect Number: 24038
Project Name: Begonia Gardens DDT
Date Received 1/21/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42102-052 **Sample ID: S-23c 15-18"** **Matrix: Solid** **Sample Date:** 1/20/2005

Method: EYA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Butch	Analysis Date	QC Batch
Dieldrin	ND		1	0.025	mg/Kg	02/03/2005	PS6283C	0210412005	PS6283C

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	88.2	37 - 129

Analyzed by: Miran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT A. 84 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.

ND = Nor Detected at or above the Detection Limit.

2/10/2005 10:00:39 AM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, **CA** 95054 **Phone: (408)588-0200** Fax: **(408)588-0201**

Quality Control - Method Blank

Solid

Prep Batch ID: PS6283C Validated by GGUEORGUIEVA - 02110105 ***QC* Batch ID:** PS6283C

Prep Date: 2/3/2005 **Analysis Date:** 2/4/2005

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	PQLR	Units
4,4'-DDD	ND	1	3.025	mg/Kg
4,4'-DDE	ND		0.02'	mg/Kg
4,4'-DDT	ND	1	0.025	mg/Kg
Aldrin	ND	1	0025	mg/Kg
Alpha-BHC	ND	1	0 025	mg/Kg
Beta-BHC	ND	I	0.025	mg/Kg
Chlordane (technical)	ND	I	0.1	mg/Kg
delta-BHC	ND	I	0.025	mg/Kg
Dieldrin	ND	I	0.025	mg/Kg
Endosulfan I	ND	I	0 025	mg/Kg
Endosulfan II	ND	I	0025	mg/Kg
Endosulfan Sulfate	ND	I	0 025	mg/Kg
Endrin	NO	I	0.025	mg/Kg
Endrin Aldehyde	ND	I	0025	mg/Kg
Endrin Ketone	ND	I	0.025	mg/Kg
Gamma-BHC (Lindane)	ND	1	0.015	mg/Kg
Heptachlor	ND	I	**0.025**	mg/Kg
Heptachlor Epoxide	ND	1	0.025	mg/Kg
Methoxychlor	ND	1	3.025	mg/Kg
Toxaphene	ND	1	0.1	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	106	37 - 129

Environmental Review Inital Study
ATTACHMENT 8, 85 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Quality Control - Laboratory Control Spike / Duplicate Results
Solid

Prep Batch ID: PS6283C **Reviewed by** GGUEORGUIEVA - 02/10/05 **QC Batch ID:** PS6283C

Prep Date: 2/3/2005 **Analysis Date:** 2/4/2005

LCS **Methad: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0 002	0 1	0.11	LCS	2/4/2005	108			25 - 160
Aldrin	c0.006	01	0.091	LCS	2/4/2005	91.1			42 - 122
Dieldrin	<0 003	0.1	0 098	LCS	2/4/2005	98.1			36 - 146
Endrin	<0 003	0.1	0.11	LCS	2/4/2005	105			30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0.093	LCS	2/4/2005	92.7			32 - 127
Heptachlor	<0.006	0.1	0.093	LCS	2/4/2005	93.1			34.111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	103	37 - 129

LCSD **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Dale	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0 10	LCSD	2/4/2005	104	3.8	30.0	25 - 160
Aldrin	<0.006	0.1	0.090	LCSD	2/4/2005	90.5	0.66	30 *0*	42 - 122
Dieldrin	<0 003	0.!	0.096	LCSD	2/4/2005	Y5.7	2.5	30.0	36 - 146
Endrin	<0.003	o i	0.10	LCSD	2/4/2005	99.7	5.6	30.0	30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	*0* 092	LCSD	2/4/2005	Y2.2	0.54	30.0	32 - 127
Heptachlor	<0.006	0.1	0.093	LCSD	2/4/2005	92.8	0.32	30 0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	99.6	37 - 129

Environmental Review Inital Study
ATTACHMENT 4, 86 of 121
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

PROJECT NAME AND JOB #: Begonia Gardens / 24038
SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Pat Hoban
ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO
GLOBAL I.D.: --
Sampler: Jered Chaney
Date: 2/16/05

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	Total Petroleum Hydrocarbons: TPH-Diesel	Total Recoverable Petroleum Hydrocarbons	TPH-Gasoline by EPA Method GC-MS	Volatile Organics: Fuel Oxygenates & BTEX EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Organochlorine Pesticides EPA Method# 8081A
S-1d 21-24"	21-24"	2/16/2005	AM	Soil				1					42476-001			X
S-1e 27-30"	27-30"	2/16/2005	AM	Soil				1							002	HOLD

RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)
1.) [signature]	2/17/05	[signature]	2/17/05 1146	Ambient / **Refrigerated** (circled) / Frozen
2.) [signature]	2/17/05 1335	[signature]	2/17/05 1335	Ambient / Refrigerated / Frozen
3.)				Ambient / Refrigerated / Frozen
4.)				Ambient / Refrigerated / Frozen
5.)				Ambient / Refrigerated / Frozen

NOTES:

- ☐ *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*
- ☐ *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*
- ☐ *Please use MDL (Minimum Detection Limit) for any diluted samples.*

ADDITIONAL COMMENTS

- Please only analyze sample for Dieldrin.

JC\Fieldloo\FORMS.xls - COC

Environmental Review Inital Study
ATTACHMENT 6, 87 of 121
APPLICATION 05-0264

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1 OF 1

PROJECT NAME AND JOB #: Begonia Gardens / 24038

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Pat Hoban

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Jered Chaney

Date: 2/16/05

LABORATORY: Entech

TURNAROUND TIME: (Standard Five-Day) 48hr Rush 72hr Rush

GLOBAL I.D.: –

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS — Total Petroleum Hydrocarbons: TPH Diesel	Total Recoverable Petroleum Hydrocarbons	TPH Gasoline by EPA Method GC-MS	Volatile Organics: Fuel Oxygenates & BTEX EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Organochlorine Pesticides EPA Method# 8081A
S-1d 21-24"	21-24"	2/16/2005	AM	Soil				1								
S-1e 27-30"	27-30"	2/16/2005	AM	Soil				1					42476-001			X
															002	HOLD

Please Run Sample #S-1e @ 27-30" for Dieldrin.

Change Order

RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.) [signature]	2/17/05	[signature]	2/17/05 1146
2.) [signature]	2/17/05 1335	[signature]	2/17/05 1335
3.)			
4.)			
5.)			

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

☐ If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L and report only confirmed 8260 detections

☐ For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.

☐ Please use MDL (Minimum Detection Limit) for any diluted samples

ADDITIONAL COMMENTS

- Please only analyze sample for Dieldrin.

Environmental Review Inital Study
ATTACHMENT 8, 88 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • *Sania* Clara, **CA** 95054 ▪ (408) 588-0203 • Fax (408) 58-8-0207

CHANGE ORDER **FORM**

Date Requested: 2-25-05

Date Needed: 3-1-05

Client: WHA

Workorder #: 42476

Project Name or #:

Ordered by:

Laboratory ID#	Client ID#	Matrix	Change Requested
42476-002			Speed up TAT (2-Day) due 3-1-05

Comments: Thx

S.

Date Test Added:

Test Added By:

Distribution:

Original in the Workorder Folder. Accounting and all involved departments must get a copy of this form.

Environmental Review Inital Study
ATTACHMENT 8, 89 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408)588-0201

Pat Hoban
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, **CA** 95076

Certificate **ID: 42476 - 2/23/2005 12:40:04** PM

Order Number: **42456**
Project Name: Begonia Gardens DDT
Project Number: **24038**

Date Received: 211712005 2:23:23 PM
P.O. Number: **24038**

Certificate of Analysis - Final Report

On February 17, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix		Method
Solid	**ETA** 80811	EPA 8081A

Entech Analytical Labs, Inc. is certified for environmental analyses by *the* State of California (#2346).
If you have any questions regarding this report, please call us at 106-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Environmental **Review** Inital Study
ATTACHMENT 8, 90 of 121
APPLICATION 05-0269

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Pat Hoban

Project Number: 24038
Prqject Name: Begonia Gardens DDT
Date Received: 2/17/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42476-001 Samole ID: S-1d 21-24" Matrix: Solid Sample Date: 2/16/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Dieldrin	0.14		1	0.025	mg/Kg	02/18/2005	PS6285B	02/18/2005	PS6285B

Surrogate	Surrogate Recovery	Control Limits (%)
Decachlorobiphenyl	80.1	37 - 129

Analyzed by: Mtran
Reviewed by: GGUEORGUIEVA

Environmental Review Inital Study
ATTACHMENT 8, 91 of 121
APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

2/23/2005 12:40:11 PM - GGueorguieva

Entech **Analytical Labs,** Inc.
3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408) 588-0201

Quality Control - Method Blank
Solid

Prep Batch ID: PS6285B
Validated by: GGUEORGUIEVA - 02/23/05
***QC* Batch ID:** PS6285B
Prep Date: 2/18/2005
Analysis Date: 2/18/2005

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	PQLR	Units
Dieldrin	ND	1	0 025	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	95.5	37 - 129

Environmental Review Inital Study
ATTACHMENT 3, 92 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Solid

Prep Batch ID: PS6285B Reviewed by GGUEORGUIEVA - 02/23/05 QC Batch ID: PS6285B

Prep Date: 2/18/2005 Analysis Date: 2/18/2005

LCS Method: EPA 8081A Conc. Units: mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.088	LCS	2/18/2005	88.3			25 - 160
Aldrin	<0 006	0.1	0.082	LCS	2/18/2005	81.8			42 - 122
Dieldrin	<0 001	0.1	0 090	LCS	2/18/2005	90.3			16 - 146
Endrin		0 1	0.095	LCS	2/18/2005	94.9			30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0.091	LCS	2/18/2005	91.1			32 - 127
Heptachlor	<0 006	0 1	0 087	LCS	2/18/2005	86.7			34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	94.3	37 - 129

LCSD Method: EPA 8081A Conc. Units: mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0 1	0.096	LCSD	2/18/2005	96.3	8.7	10 0	25 - 160
Aldrin	<0.006	0.1	0.083	LCSD	2/18/2005	82.6	0.97	30.0	42 - 122
Dieldrin	<0.003	0.1	0.091	LCSD	2/18/2005	90.7	11.44	10.0	16 - 146
Endrin	<0 003	0.1	0.085	LCSD	2/18/2005	85.4	11	30.0	30 - 147
Gamma-BHC (Lindane)	<0.006	0 1	0.086	LCSD	2/18/2005	86.1	5.6	10.0	32 - 127
Heptachlor	<0.006	0 1	0,086	LCSD	2/18/2005	85.7	1.2	30.0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	109	37 - 129

Environmental Review Inital Study
ATTACHMENT 8, 93 of 121
APPLICATION 05-0269

Paia Levine Hutter cmst

From: Lucia Ruiz-Garcia
Sent: Friday, December 09, 2005 8:20 AM
To: Paia Levine
cc: Cathleen Carr; Randall Adams
Subject: FW: EC Agenda for 12-12-05

Good morning!!

Here is this comment from Chris Adair of Central Coast Regional Water Quality Control Board:

-----Original Message-----
From: Chris Adair [mailto:Cadair@waterboards.ca.govl
Sent: Wednesday, December 07, 2005 5:17 PM
To: Lucia Ruiz-Garcia
Subject: Re: EC Agenda for 12-12-05

Thank you for the opportunity to comment. Please remind applicants 03-0465 and 05-0269 that a Construction General Permit from the Central Coast Water Board is required for activities which disturb 1 or more acres. Please contact me for details at the number below.

Chris Adair, P.E.
Senior Water Resource Control Engineer
Central Coast Regional Water Quality Control Board
835 Aerovista Place, Suite 101
San Luis Obispo, CA **93401**
(805) 549-3761
cadair@waterboards.ca.gov

>>> "Lucia Ruiz-Garcia" <PLN113@co.santa-cruz.ca.us> 12/7/2005 12:12 PM >>>
Good morning!!

Here is the Environmental Coordinator's Agenda for December 12, 2005. There are 4 Items on this Agenda.

Have a great day!!

Lucia Ruiz-Garcia
Administrative Eearing Clerk &
Environmental Coordinator's Clerk
701 Ocean Street, Room 400
Santa Cruz, CA 95060
(831) 454-3155
pln113@co.santa-cruz.ca.us

Environmental Review Inital Study
ATTACHMENT 13, 6 of 5
APPLICATION 05-0269

2. Site soil cleanup levels have been established for DDX and dieldrin, yet the Initial Study seems to indicate the presence of additional contaminants in Site soils, possibly also requiring cleanup levels. Table 1 (Initial Study Attachment 8, pages 29 through 32) reports lindane, chlordane and endosulfan also present in Site soils, not surprising at a long established commercial nursery. Possibly this issue has been resolved without a description in the Initial Study.

3. The initial Study does not address other possible Site soil contaminants that could alter pesticide fate and transport For example, petroleum hydrocarbons, such as some pesticide carriers or unrelated solvents, can increase pesticide solubility and migration potential. It would not be unusual for hydrocarbons *to* have been released to soil at this long established commercial nursery. Possibly this issue has been resolved without a description in the Initial Study.

4. Marina Landfill is not permitted to accept hazardous waste. as apparently contemplated by the Initial Study. The Initial Study states soil excavated from the Site (above the cleanup levels of 1,000 ppb DDX or 30 ppb dieldrin) will be disposed at Marina Landfill. California Code of Regulations (CCR) 22 Hazardous Waste regulations mandate that soil with greater than 1,000 ppb DDX is Hazardous Waste, which Marina Landfill is not permitted to accept. Subsequent discussions indicate soils destined for Marina have an average DDX concentration less than 1,000 ppb, which may or may not resolve this issue, depending on specifics. In general, dilution of a hazardous waste soil with cleaner soil to qualify the entire volume as nonhazardous is unacceptable.

5. The Initial Study does not address ecological risk, threat to nonhuman receptors, *of* soil contaminants allowed to remain onsite with no containment. This analysis may be beyond the scope of the project. though it is an environmentally valid concern.

6. The Initial Study does not address threat to groundwater of soil contaminants allowed to remain onsite.

Please feel free to contact **David Schwartzbart** at (805) **542-1613** or dschwartzbart@waterboards.ca.gov with questions on these issues or for assistance in resolving them.

Sincerely.

Sheila Soderberg for

Roger W. Briggs
Executive Officer

Environmental Review Inital Study
ATTACHMENT 13 3 of 5
APPLICATION 05-0269

cc:

Steve Schneider
Santa Cruz Co. Health Services Agency
701 Ocean Street, Room 312
Santa Cruz, CA 95060-4073

Rolando Charles
Santa Cruz Co. Health Services Agency
701 Ocean Street, Room 312
Santa Cruz, CA 95060-4073

Dan Niles
Central Coast Water Board

Dominic Roques
Central Coast Water Board

S/SLIC/Regulated Sites/Santa Cruz County/Hulter Begonia Garden/1-06 Let

MONTEREY BAY --
Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTIONCONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

January 24,2006

Ms. Cathleen Carr, Project Planner
Santa Cruz County Planning Dept.
710 Ocean Avenue
4th Floor
Santa Cruz, CA 95060

SUBJECT: MND FOR STROHBEEN RESIDENTIAL SUBDIVISION (NO. 05-0269)

Dear Ms. Can:

Demolition of Buildings

The Project Comment request sent in the spring described demolition of the nursery that was to occur prior to construction of the subdivision. There is no mention of the demolition in the Project Description sent with this document, so I am asking if Mike Sheehan of the District Compliance Division was contacted as requested in my May 11 letter to you?

Impacts of Construction Diesel Exhaust

Given the proximity of the project to adjacent residences, did you contact the District regarding a diesel risk assessment? If not, please do so, to determine the health risks and any necessary mitigation measures.

Consistency with the AOMP

Please request a consistency determination from AMBAG for the increased residential population accommodated by this development.

Thank you for the opportunity to comment on the document.

Yours truly,

Jean Getchell
Supervising Planner
Planning and Air Monitoring Division

cc: Mike Sheehan, Compliance Division
David Craft, Engineering Division
Todd. Muck. AMBAG

Environmental Review Inital Stu
ATTACHMENT 13 4 of 5
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408)588-0201

Pat Hoban
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate **ID: 42476 - 2/28/2005 2:19:52 PM**

Order Number: **42476**
Project Name: Begonia Gardens DDT
Project Number: **24038**

Date Received: 2/17/2005 2:23:23 PM
P.O. Number: **24038**

Certificate of Analysis - Additional Work

On February 17, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Solid	EPA 8081A	EPA 8081A	

Entech Analytical Labs, Inc. is certified for environmenral analyses by the State of California (#2346).
If you have any quesrions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Environmental Review Inital Study
ATTACHMENT 8, 94 of 121
APPLICATION 05-0269

Environmental Ana., sis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408)588-0201

Weber, Hayes and Associates
120 Westgate Drive
Walsonville, CA 95076
Attn: Pot Hoban

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 2/17/2005
P.O. Number: **24038**
Sample Collected by: Client

Certificate of Analysis -Data Report

Lab # : 42476-002 **Sample ID: S-1e 27-30"** **Matrix:** Solid **Sample Date:** 2/16/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Dale	Prep Batch	Analysis Date	QC Batch
Dieldrin	0.16		1	0.025	mg/Kg	02/24/2005	PS6287B	02/25/2005	PS6287B

Surrogate	Surrogate Recovery	Control Limits (%)	
Decachlorobiphenyl	94.1)	37 - 129	

Analyzed by: Mtran
Reviewed by: MTU

Environmental Review Inital Study
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Detection Limit = Detection Limit for Reporing.
DF = Dilution and/or Prep Factor inciuding sample volume adjustments.

ND = Not Detected at or above the Detection Limii.

2/28/2005 2:20:05 PM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Solid

Prep Batch ID: PS6287B Validated by MTU - 02/28/05 **QC Batch ID: PS6287B**

Prep Date: 2/24/2005 **Analysis Date: 2/25/2005**

Method Blank **Method: EPA 8081A**

Parameter	Result	DF	PQLR	Units
Dieldrin	ND	1	0.025	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
Decachlorobiphenyl	91.8	37 - 129

Environmental Review Inital Study
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Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Solid

Prep Batch ID: PS6287B **Reviewed by** MTU - 02/28/05 **QC Batch ID:** PS6287B

Prep Date: 2/24/2005 **Analysis Date:** 2/25/2005

LCS **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Dale	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.060	LCS	2/25/2005	59.8			25 - 160
Aldrin	<0.006	0.1	0.071	LCS	2/25/2005	71.3			42 - 122
Dieldrin	<0.003	0.1	0.072	LCS	2/25/2005	72.0			36 - 146
Endrin	<0.003	0.1	0.070	LCS	2/25/2005	70.4			30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0.076	LCS	2/25/2005	75.9			32 - 127
Heptachlor	<0.006	0.1	0.074	LCS	2/25/2005	74.1			34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	95.2	3 - 12Y

LCSD **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0.1	0.069	LCSD	2/25/2005	68.6	6.8	30.0	25 - 160
Aldrin	<0.006	0.1	0.078	LCSD	2/25/2005	78.1	9.1	30.0	42 - 122
Dieldrin	<0.003	0.1	0.082	LCSD	2/25/2005	81.5	12	30.0	36 - 146
Endrin	<0.003	0.1	0.083	LCSD	2/25/2005	82.9	16	30.0	30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0.083	LCSD	2/25/2005	83.3	9.3	30.0	32 - 127
Heptachlor	<0.006	0.1	0.081	LCSD	2/25/2005	81.0	8.9	30.0	34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	93.7	37 - 129

Environmental Review Inital Study

ATTACHMENT 8 97 of 121

APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: Begonia Gardens Pesticide Testing (#24038)

LABORATORY: ENTECH

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates (Pat Hoban)

TURNAROUND TIME: Normal RUSH - Same Day

Sample ID# & Depth (sampler: J. Chaney)	Date Sampled	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: Extractables as Diesel (w/ standard Silica-Gel-Cleanup)	Purgeable Fuel-Scan with MTBE-BTEX	Gasoline & BTEX-MTBE by EPA Method# 8015M & 8020	Volatile Organics: MTBE by EPA Method# 8260	SOLVENTS by EPA Method# 8010	Additional Analysis: Organochlorine Pesticidees by EPA Method 8081A: DDD, DDE & DDT	Dieldren
S-1f 33-36-In"	Feb-16-05	HOLD			x	H2605-001						

RECEIVED BY: | Date & Time | **RELEASED BY:** | Date & Time | SAMPLE CONDITION: (circle 1)

1.) Sampler: Jered Chaney	2-16-05	→ Weber, Hayes & Associates Soil Freezer	2-16-2005	Ambient	Refrigerated	Frozen
2.) Weber, Hayes & Associates Soil Freezer	2-25-05		2/25/05	Ambient	Refrigerated	Frozen
3.) [signature]	2/25/05	→ [signature]	2/25/05 1348	Ambient	Refrigerated	Frozen
4.) [signature]	2/25/05 1447	[signature]	2/25/05 1515	Ambient	Refrigerated	Frozen
5.)		[signature]	2/25/05 1500	Ambient	Refrigerated	Frozen

NOTES - Lab to complete the following if box is checked:

- ☐ *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*
- ☐ *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*
- ☐ *Please use MDL (Minimum Detection Limit) for any diluted samples.*

Additional Comments

NOTE: Samples on HOLD until results of shallow samples are completed

PLEASE USE MINIMUM DETECTION LIMITS (need mimimum of 0.025 mg/kg) – Thank you.

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Environmental Review Initial Study
ATTACHMENT 1
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax (831) 722-1159

CHAIN-OF-CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME AND JOB #: Begonia Gardens Pesticide Testing (#24038)

LABORATORY: ENTECH

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates (Pat Hoban)

TURNAROUND TIME: Normal RUSH - Same Day

Sample ID# & Depth	Date Sampled	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS — Total Petroleum Hydrocarbons: Extractables as Diesel	Purgeable Fuel-Scan with MTBE BTEX	Gasoline & BTEX-MTBE by EPA Methods 8015/8020	Volatile Organics: MTBE by EPA Method 8260	SOLVENTS by EPA Method 8260	Additional Analysis (Organochlorine Pesticides by EPA Method 8081A): DDD, DDE & DDT	Dieldrin
S-1f 33-36-in"	Feb-16-05	HOLD			x			42605-001				

Please run Sample S-1f @ 33-36-inches for Dieldren if there is a detection in Sample S-1e @ 27-30" (Entech ID#: # 42476-002)

RECEIVED BY:	Date & Time	RELEASED BY:	Date & Time	SAMPLE CONDITION: (circle 1)
Jerod Chaney	2-16-05	Weber, Hayes & Associates Soil Freezer	2-18-2005	Ambient Refrigerated (Frozen)
Weber, Hayes & Associates	2-25-05	[signature]	2/25/05	Ambient Refrigerated (Frozen)
[signature]	2/25/05	[signature]	2/25/05 1348	Ambient Refrigerated Frozen
[signature] Machado	2/28/05 1500			Ambient Refrigerated Frozen
				Ambient Refrigerated Frozen

NOTES - Lab to complete the following if box is checked:

Additional Comments

NOTE: Samples on HOLD until results of shallow samples are completed

PLEASE USE MINIMUM DETECTION LIMITS (need minimum of 0.025 mg/kg)

Thank you

Environmental Review Inital Study
ATTACHMENT 9, 99 of 121
APPLICATION 05-0269

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Pat Hoban
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 42605 - 3/4/2005 12:06:52 PM

Order Number: **42605**
Project **Name:** Begonia Gardens **DDT**
Project **Number: 24038**

Date Received: **2/28/2005 3:12:26 PM**
P.O. Number: **24038**

Certificate of Analysis - Final Report

On February 28, 2005, sample was received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Solid	EI'A 8081A	ETA 8081A	

Enrech Analytical Labs, Inc. is certified *for* environmental analyses by the State of California (#2346)
If you have any quesrions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely.

Laurie Glantz-Murphy
Laboratory Director

Environmental Review Inital Study
ATTACHMENT 4, 100 of 121
APPLICATION 05-0269

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Pat Hoban

Project Number: 24038
Project Name: Begonia Gardens DDT
Date Received: 2/28/2005
P.O. Number: 24038
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab ?#: 42605-001 Sample ID: S-1f@ 33-36" Matrix: Solid Sample Date: 2/16/2005

Method: EPA 8081A - Organochlorine Pesticides by Gas Chromatography

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Bitch
Dieldrin	0 20		1	0 025	mg/Kg	0310112005	PS6287C	03/02/2005	PS6287C

Surrogate	Surrogate Recovery	Control Limits (%)			
Decachlorobiphenyl	103	37	-	129	

Analyzed by: Mtran
Reviewed by MTU

Environmental Review Inital Study
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APPLICATION 05-0269

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

3/4/2005 12:24 53 PM - GGueorguieva

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408)588-0200 Fax: (408)588-0201

Quality Control - Laboratory Control Spike / Duplicate Results
Solid

Prep Batch ID: PS6287C
Reviewed by: MTU - 03/03/05
QC Batch ID: PS6287C
Prep Date: 3/1/2005
Analysis Date: 3/1/2005

LCS **Method: EPA 8081.4** Conc. **Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
4,4'-DDT	<0.002	0 1	0 083	LCS	3/1/2005	83.4			
Aldrin	<0 006	0.1	0066	LCS	3/1/2005	65.9			42 - 122
Dieldrin	<0.003	0 1	0 077	LCS	3/1/2005	76.7			36 - 146
Endrin	<0.003	01	0 077	LCS	3/1/2005	77.1			30 - 147
Gamma-BHC (Lindane)	<0.006	0.1	0.067	LCS	3/1/2005	67.4			12 - 127
Heptachlor	<0.006	0.1	0.069	LCS	3/3/2005	68.5			34 - 111

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	102	37 - 129

LCSD **Method: EPA 8081A** **Conc. Units:** mg/Kg

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPU	RPD Limits	Recovery Limits
4.4'-DDT	<0.002	0.1	0.081	LCSD	3/1/2005	80.5	3.5		
Aldrin	<0.006	0.1	0064	LCSD	3/1/2005	64.1	28	30.0	42 - 122
Dieldrin	<0.003	0.1	0,075	LCSD	3/1/2005	75.3	1.8	30.0	36 - 146
Endrin	<0.003	0.1	0.076	LCSD	3/1/2005	75.6	2.0	30.0	30 - 147
Gamma-BHC (Lindane)	<0 006	0.1	0.067	LCSD	3/1/2005	66.5	1.3	30.0	32 - 127
Heptachlor	<0 006	0.1	0.067	LCSD	3/1/2005	67.0	2.2	3c.0	34 - 11:

Surrogate	% Recovery	Control Limits
Decachlorobiphenyl	98	37 - 129

Environmental Review Inital Study
ATTACHMENT 8, 102 of 121
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: Begonia Gardens Pesticide Testing (#24038)

LABORATORY: ENTECH

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates (Pat Hoban)

TURNAROUND TIME: Normal RUSH - Same Day

Sample ID# & Depth (Sampler: J. Chaney)	Date Sampled	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___ mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS — Total Petroleum Hydrocarbons: Extractables as Diesel	Purgeable Fuel-Scan with MTBE-BTEX	Gasoline & BTEX-MTBE by EPA Methods 8015M & 8020	Volatile Organics: MTBE by EPA Methods 8260	SOLVENTS by EPA Methods 8010	Additional Analysis — Organochlorine Pesticides by EPA Method 8081A: DDD, DDE & DDT	Dieldren
S-1f 33-36-in"	Feb-16-05	HOLD			x			42605-001				

Please run Sample S-1f @ 33-36-inches for Dieldren if there is a detection in Sample S-1e @ 27-30" (Entech ID#: # 42476-002)

RECEIVED BY:	Date & Time	RELEASED BY:	Date & Time	SAMPLE CONDITION:
Jered Chaney	2-16-05	Weber, Hayes & Associates Soil Freezer	2-16-2005	Ambient Refrigerated (Frozen)
Hayes & Associates Freezer	2-25-05	[signature]	2/25/05	Ambient Refrigerated (Frozen)
[signature]	2/25/05	[signature]	2/25/05 1348	Ambient Refrigerated Frozen
[signature]	2/28/05 1500			Ambient Refrigerated Frozen
				Ambient Refrigerated Frozen

YES - Lab to complete the following if box is checked:

... detected by EPA 8015 or 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L and report only ... 8260 ...

... analyzed samples with non-detectable results (ND) but having elevated detection limits, please re-analyze by EPA Method 8020

... MDL (Minimum Detection Limit) for any dilution samples

Additional Comments

NOTE: Samples on HOLD until results of shallow samples are completed

PLEASE USE MINIMUM DETECTION LIMITS (fixed minimum of 0.025 mg/kg)
- Thank you

Environmental Review Inital Study
ATTACHMENT 9, 103 of 121
APPLICATION 05-0269

APPENDIX 5

DOCUMENTATION

1. Landfill Acceptance Documentation

2. Field Logs

3. Field Methodology

Pat Hoban

From: "Rick Shedden" <rshedden@mrwmd.org>
To: "Pat Hoban" <pat@weber-hayes.com>
Sent: Wednesday, February 09, 2005 10:56 AM
Subject: RE: 650 cubic yards *of* soils - Landfill Acceptance Request

Pat.

The District can accept this soil with low-level pesticide concentrations. The fee will be $5.00 per ton. plus a one-time processing fee of $50.00.

Richard D. Shedden, P.E.
Senior **Engineer**
Monterey Regional Waste Management **District**
P O. Box 16%
Marina. CA 93933
PH **831-384-5313**
FAX: **831-354-3567**
rshedden@mrwmd org

-----Original Message-----
From: Pat Hoban [mailto:pat@weber-hayes.com]
Sent: Thursday, February 03, 2005 4:09 PM
To: Rick Shedden
Subject: 650 cubic yards ***of*** soils - Landfill Acceptance Request

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

Rick Shedden. Senior Engineer
Marina Landfill
Monterey Regional Waste Management District

Hello Mr. Shedden:

We are completing a shallow soils assessment *for* converting commercial properly to residential. Since the property is currently a retail flower nursery and development pians are for converting to single family residences we screened shallow soils for standard persistent pesticides by EPA 8081A. We got some low levei pesticide detections in surface soils that we want to scrape *off* to achieve "residential screening leveis". This shallow grading will generate approximately 650 cubic yards of soil for disposal.

I've tabulated the results (ATTACHED) which indicate relatively low-level pesticide concentrations are present across the site, but exceed the residential screening limits in 3 of 12 locations (DDT detected at 2 locations and Dieldrin at 8 locations - one overlaps). Both Dieldrin and DDT are from a family of pesticides were banned since the early 970 because of their persistence (immobile in soil) The concentrations detected are fairly typical for agricultural soils in the State of California. Averages have been calculated on the attached EXCEL table which show:

- Average **Dieldrin** concentrations for the area to be scraped are 0.06 mg/kg (parts per million)
- Average **DDT** (Cumulative - DDT+DDD+DDE) concentrations for the area to be scraped are 0.80 mg/kg

The site is located at 2545 Capitola Road, Santa Cruz. We are trying to find a home for this soil as part of development planning and will likely move the soil in May-June of this year. **Could you let me know of the approval status for the soil at your facility**

Thank you for your help,

Environmental Review Inital ***Study*** 4/ 0:

ATTACHMENT 8, 10 of 121

APPLICATION 05-0269

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Pal Hoban
Senior Geologist

Weber, Hayes &Associates
120 **Westgate** Drive, Watsonville, **CA** 95076
Phone: (831) 722-3580
www.weber-hayes.com

Attachments: Summary tabie of lab results + Certified analytical results.

Environmental Review Inital Stud
ATTACHMENT 4, 186 of 121
APPLICATION 05-0269

4131200:

TABLE 1
Soil Results
Persistent Organochlorine Pesticide Analysis
Begonia Gardens
2545 Capitola Road, Santa Cruz

All soil results are in parts per million (mg/kg).

Sample ID	Lab ID	Depth (inches below ground surface)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Cumulative DDT-DDE-DDD	Aldrin	Alpha-BHC (HCH alpha)	Beta-BHC (HCH beta)	Chlordane (technical)	delta-BHC (HCH delta)	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Lindane (Gamma-BHC)	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
			Persistent Organochlorine Compounds by EPA 8081A																				
#1a	42102-001	3 - 6	0.17	0.21	ND	0.38	ND	ND	ND	ND	ND	0.085	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#2a	42102-003	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#3a	42102-006	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#4a	42102-007	3 - 6	0.25	0.081	0.033	0.374	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#5a	42102-008	3 - 6	0.13	0.1	0.046	0.276	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#6a	42102-011	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#7a	42102-012	3 - 6	ND	ND	0.049	0.049	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND
#8a	42102-016	3 - 6	0.25	0.17	0.077	0.497	ND	ND	0.07	ND	ND	0.072	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#9a	42102-017	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#10a	42102-018	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#11a	42102-021	3 - 6	ND	0.048	ND	0.048	ND	ND	ND	ND	ND	0.075	0.051	0.096	0.18	ND	ND	ND	ND	ND	ND	ND	ND
#12a	42102-023	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	0.06	ND	ND	ND	ND	ND	ND	ND	ND
#13a	42102-025	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#14a	42102-027	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#15a	42102-028	3 - 6	0.047	0.043	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#16a	42102-031	3 - 6	ND	ND	0.037	0.037	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#17a	42102-033	3 - 6	0.035	0.064	0.14	0.239	ND	ND	ND	ND	ND	0.034	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND
#18a	42102-035	3 - 6	1.4	0.19	3.8	5.39	ND	ND	0.1	ND	ND	0.012	ND	ND	0.029	ND	ND	ND	ND	ND	ND	ND	ND
#19a	42102-037	3 - 6	0.54	0.11	0.1	0.75	ND	ND	0.086	0.26	0.056	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#20a	42102-039	3 - 6	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#21a	42102-041	3 - 6	ND	ND	0.062	0.062	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#22a	42102-043	3 - 6	ND	ND	ND	0	ND	ND	0.065	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#23a	42102-045	3 - 6	0.55	0.11	0.2	0.86	ND	ND	0.14	ND	ND	0.082	ND	ND	0.007	ND	ND	ND	ND	ND	ND	ND	ND
#24a	42102-047	3 - 6	0.28	0.21	0.06	0.55	ND	ND	0.029	0.16	ND	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
#25a	42102-048	3 - 6	0.25	0.2	3	1.46	ND	ND	0.064	0.27	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Laboratory Practical Quantitation Limit (PQL):			0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.1	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.1
Preliminary Remediation Goals (PRGs)[1]:			2.4	1.7	1.2	1.7 (most conservative)	0.029	0.09	0.32	1.6	Not Established	0.03	379 (Endosulfan)			18 (Endrin)			0.44	0.11	0.053	310	0.44

file: K:\A Jobs\AJOB\24038.begonia\TABLES\begonia-soil-results

NOTES:

NA = Not Applicable

ND = Not Detected at or above the laboratory PQL

Bold Concentration: Indicates analytical concentration is above PRG's

1 = Preliminary Remediation Goals (PRG's) for residential sites are listed. US EPA Region 9 has provided these values for sites having elevated levels of non-native chemicals in soil and water. The PRGs are risk-based contaminant concentration limits which are used as a guidance to protect human health and safety, including sensitive groups, over a lifetime. PRGs are for relative comparison purposes (guidance) and should be evaluated using site-specific conditions (revised October 2004)

BHC: Synonyms: HCH, Hexachlorocyclohexane.

alpha-BHC: a-Hexachlorocyclohexane (under Lindane and Other Hexachlorocyclohexane: alpha-BHC, alpha-Hexachlorocyclohexane, alphaBHC, BHC, alpha isomer, Hexachlorocyclohexane alpha

Lindane: Agrocide, Ambrocide, Aparasin, Aphtiria, Benesan, Benexane, benhexachlor, benzene hexachloride, BHC, Bexol, Borer-Tox, Entoxama, Gallogama, Gamaphex, gamma-BHC, Gamma-Col, gamma-HCH, Gammex, Gammexane, Gamasan, Gexane, hexachlorocyclohexane, HCH, Jacutin, Kwell, Lindafor, Lindagranox, Lindatox, Lindosep, Lintox, Lorexane, New Kotol, Novigam, Quellada, Streunex, Silvanol, and Tri-6

NOTE: Lindane (or hexachlorocyclohexane, HCH) has historically and widely been inappropriately referred to as "benzene hexachloride" or "BHC." This compound should not be confused with hexachlorobenzene, or HCB.

DRAFT

K:\A Jobs\AJOB\24038.begonia\TABLES\begonia-soil-results.xls

Weber, Hayes and Associates

Environmental Review Inital Study
ATTACHMENT 8, 107 of 121
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100
SITE MAP
Sample Locations & Soil Analytical Results
Antonelli Bagonia Gardens Nursery
2541 Capitola Road
Santa Cruz, California
(APN #029-37-118)
FIGURE
2
Job #
24038
DRAFT
Macriel Road
Encina Drive
Byer Road
Willa Way
Approximate Scale in feet
Base Map from
SC Planning Department
Water Production Well
ND = Not Detected
Laboratory Analyses Results (mg/kg):
-- Organochlorine pesticides by EPA Method #8081
-- "Cumulative DDT includes DDT, DDD, & DDE.
Samples labeled "a" (i.e. S-1a) have been collected from 3 - 6" bgs.
Samples labeled "b" (i.e. S-1b) have been collected from 9 - 12" bgs.
Samples labeled "c" (i.e. S-1c) have been collected from 15 - 18" bgs.
Sample Locations & Identification:
-- Approximately 1 discrete sample per 50' (see map). Samples to be obtained in accessible locations.
K:\Jobs\JOB\24038 Jagonia\FIGURE2-DDT Soil Analytical Results.CNV

Field Methodologies for: Shallow Soil Sampling

This appendix provides descriptions of methods that are used during shallow soii investigations. Included are specifications for shallow soil sampling with a slide hammer and decontamination procedures. Field work complied with standards set in the State Water Resources Control Board guidelines (LUFT Manual, 1989)

Shallow Soil Sampling Procedures: A hand auger was used to get to a point immediately above the sampling depth. Once at the desired sampling depth. a slide hammer was used to drive a clean brass liner encased in the slide hammer sampling shoe to obtain a relatively undisturbed sample, The slide hammer consists of a weighted slide rod connected to an empty sampling shoe containing a clean, brass liner. The weighted handle is manually slid along the rod to force the sampling shoe into the native soils.

Relatively undisturbed native materials was retrieved from the sampler and field work logged by an experienced field geologist noting unusual soils lithology, moisture content, and any unusual odor or discoloration, The liner and undisturbed soils were removed from the sampling shoe, the liner was protected at both ends with Teflon tape, sealed with non-reactive caps, taped, and immediately stored in an insulated container cooled with blue ice. Selected samples were transported under appropriate chain-of-custody documentation to a State certified laboratory for performing the targeted analysis.

Equipment Decontamination and Containerization Procedures: All sampling equipment was cleaned prior to arriving on site to prevent possible transfer of contamination from another site. Additionally, sampling equipment was thoroughly cleaned between each sampling run with a Liqui-Nox ® or Alconox ® solution followed by a double rinsing with distilled water to prevent transfer *of* contamination from location to location onsite. All sampling equipment was cleaned at the end *of* sampling operations to prevent the possible transfer of contamination to another site.

Environmental Review Inital Study
ATTACHMENT 9
APPLICATION 05-0092 /21

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

Text Page 1 / 1

INDICATE ATTACHMENTS THAT APPLY

- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- X Chargeable Materials

Client	**Begonia Gardens**	Date:	**February 16, 2005**
Site Location:	**2541 Capitola Road, Sania Cruz, CA**	Study #:	**24038**
Field			

TIME:	
1000	→ Leave WHA office for site.
1030	→ Arrive Onsite
	• Break away cold patch from S-1 Sample location
1040	→ Begin hand-augering to first target depth of 30" bgs for Sample:
	S-1d 21-24" (Sample depth 30" = 21" below subgrade.)
1053	→ Target depth reached (i.e. 30" bgs): Collect Sample S-1d
1057	→ Sample S-1d Collected; hand auger to next target depth (i.e. 36" bgs)
1102	→ Second target depth reached; Collect Sample S-1e 27-30" (i.e. 36-39" below site grade)
1108	→ Collect another auger sample as back-up (i.e. 42-45"): S-1f 33-36"
	• Hold this sample @ WHA office freezer.
1118	→ Sample Collection Complete.
	• Backfill boring w/ excavated materials (soils), followed by cold patch surface completion
1133	→ Boring location backfilled + cold patched to grade.
	• Cleanup sample equipment
1140	• Leave site for WHA office.

JC
2/16/05

Environmental Review Inital Study
ATTACHMENT 8, 110 of 121
APPLICATION 05-0269

[signature] 2/16/05
Signature of Field Personel & Date

JC\Filedlog\FORMS.xls - Standard Field Notes

Webber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

SITE MAP
Antonelli Begonia Gardens Nursery
2541 Capitola Road
Santa Cruz, California
(APN #029-37-118)

FIGURE
2
Job #
24038

Explanation

- Proposed Sample Locations:
  - approximately 1 discrete sample per 50' (see map). Samples to be obtained in accessible locations.
  - 1) A total of approximately 25 discrete surface samples will be collected from a depth of 6-inches.
  - 2) We will collect additional samples at depth of 12-inches as backup.
- Laboratory Analyses:
  - Organochlorine pesticides by EPA Method #8081 (includes DDT, DDD, DDE)
- Water Production Well

Environmental Review Inital Study
ATTACHMENT 8, 11 of 121
APPLICATION 05-0269

Pat Hoban

From: "Pat Hoban" <pat@weber-hayes.com>
To: "(ENTECH) Simon Hague" <shague@entechlabs.com>
CC: "WHA-Jered Chaney" <jered@weber-hayes.com>
Sent: Friday, February 25, 2005 2:35 PM
Subject: Re: Potential request for additional lab testing of hold samples (Order # 42476-002)

Hello Simon,

Jered was on top of things and obtained a deeper sample on Feb 16th, at the Begonia Gardens site (stored in WHA freezer), I just sent this sample off to Entech with Ron who was hare to pick up other samples.

I'd like to run the sample if we get a hit on the shallower sampie (Order# 42476-002, which was OKed by email yesterday). However we'll quickly come up on the sample hold time as we're on Day 9 today. Can I leave this one in your hands to quickly turn around **if** needed? (See ATTACHED Chain of Custody sent with Ron)

When you get **a** chance, could you please call to confirm,

Thanks

Pat

---Original Message —
From: Pat Hoban
To: (ENTECH) Simon Haoue
Cc: Basil Steiaer-Bob Hulter; WHA-Jered Chaney
Sent: Thursday, February 24, 2005 3:50 PM
Subject: Request for additional lab testing - Order # 42476402

Site: Antonelii's **Begonia** Gardens, **2545** Capitola Road, Santa **Cruz**

Good Afternoon Simon,

I'd like to request analysis of the deeper sample in Order # 42476-002 (Sample ID #S-1e @ 27-30", see attached Chain of Custody). Specifically:

- **S-1e @ 27-30 inches** for Dieldren

Thank you,

Pat Hoban
Senior Geologist

Weber, Hayes & Associates
120 Westgate Drive, Watsonville, CA 95076
Phone (831) 722-3580
www weber-haves com

Environmental Review Inital Study
ATTACHMENT 8, 112 of 121
APPLICATION 05-0269

2/28/200

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

INDICATE ATTACHMENTS THAT APPLY
___ Site Map

Client: **Antonelli's Beonia Gardens**	Date: **January 20, 2005**
Site Location: **2545 Capitola Road. Santa Cruz**	Study #: **24038**
Field Tasks; ☐ Drilling ☑ Sampling ☑ Other (see below): **Shallow Soil Sampling**	Weather **Conditions:** Clear / Fair
Personnel / Company On-Site: **Jered Chaney & Josh Hannaleck (Weber, Hayes and Associates: WHAJ**	

TIME:

0730	— Arrive Onsite. • Prep for sampling. • Basil has made cuts in the asphalt for sample locations S-1 & S-2. Begin removing asphalt.
0745	— S-1 location has not been cut through all the way. Will need to break up asphalt by hand.
0800	— Begonia Gardens is not yet open. In my conversation w/ Basil last week, he understood that I would be starting work/sampling at 0730. I will try and contact him to see about gaining access. • Learn on Basil's call
0805	— JAH & WHA onsite to help collect soil samples. - Begin Hand auger & Sample collection in S-1 & S-2; Hand auger to 1' for Shallow samples (below base rock)
0835	— S-1 & S-2 to be completed by JAH. He will start at that end of the grid. I will begin sampling at the opposite end of the yard (S-25 in reverse).
0930	— Rolando Charles (SC-HSA) onsite. Spoke w/ him briefly about sampling plan. RC will not be in town for two weeks after next Friday. Tim Epperson will be our contact after that time. • RC leaves site.
1010	— S-7 is also under asphalt; Dennis (crew leader) escalates to sample HSA as he is going to pressure wash this area. Sample S-7 now.
1030	— S-7 location broken out; JAH to hand auger native soils for samples. • Continue Sampling back grid.
1045	— Basil Calls to check in. I tell him that S-1 & S-2 were very difficult to bore through (i.e. base rock to ~15" in S-1). Tell him that Joe will return to this location at end of day if we have time, otherwise we will have to send him a change order to remove at end of day. End of Conversation.
1455	— S-1, & S-3-25 Sampling Complete. • Continue Augering S-2 Yellow subgrade

1/20/05
Signature of Field Personnel & Date

JC\Filedlog\FORMS.xls - Standard Field Notes

Environmental Review Initial Study
ATTACHMENT 8, 113 of 121
APPLICATION 05-0269

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3180
Fax: (831) 722-1159

INDICATE ATTACHMENTS THAT APPLY
— Site Map

Client: *Antonelli's Beonia Gardens*	Date: *January 20, 2005*
Site Location: *2545 Capitola Road, Santa Cruz*	Study #: *24038*
Field Tasks: ☐ Drilling ☑ Sampling ☑ Other (see below): *Shallow Soil Sampling*	Weather Conditions: *Warm & Sunny*
Personnel / Company On-Site: *Jered Chaney & Josh Hannaleck (Weber, Hayes and Associates: WHA)*	

1510 → Sample point S-2 at 2.3' below grade, seem to be in mostly native soil (i.e. on weathered rock).
- Collect 1st sample S-2a @ 2.3' bgs, and deeper samples at 3" and 6" below that
- JAH to call patching those locations that have been saw cut and broken out.

1540 → All samples have been collected. Will schedule a courier from Entech to pick up samples tomorrow.
- Cold patch S-2 location
- Clean up / Pack up Sample equipment

- Soil types encountered at this site consisted of Silty sands from ~0.0-0.5' bgs and Clay from 0.5' to target sample depths of ~ 18". These soil types were routinely encountered at the above mentioned depths.

1610 → Leave site to WHA office. JAH leaves site for WHA office

1635 → Arrive @ WHA offices.
- Unload equip.
- Will set samples tomorrow - Only "a" & "b" samples will go to lab, WHA will hold all "c" samples for now.

JC
1/20/05

Environmental Review Inital Study
ATTACHMENT 8, 114 of 121
APPLICATION 05-0269

1/20/05
Signature of Field Personel & Date

JC\Fieldlog\FORMS.xls - Standard Field Notes

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **Begonia Gardens**			Date: **January 20, 2005**
Site Location: **2541 Capitoia Road, Santa Cruz, CA**			Study #: **24038**
Field Tasks: [ ] Drilling	[X] Sampling	[ ] Other (see below):	Weather Conditions:
Soil Sampling for DDT, DDD, and DDE			CLEAR
Personnel / Company On-Site	**Josh Hannaleck (Weber, Hayes and Associates: WHAJ**		

TIME:

0800 ON-SITE → JC ALREADY ON-SITE

FOR SAMPLE POINT S-1 IN PARKING LOT, ASPHALT NOT CUT THRU
→ BREAK OUT ASPHALT IN ORDER TO OBTAIN SAMPLE.
DIG THRU BASE ROCK (~4") TO NATIVE SOIL
→ S-1 HAD ~13" OF BASE ROCK, THEN NATIVE
→ S-2 HAS ~16" SO FAR

0935 → PH (WHA) ← EXPLAIN S-1 & 2 SITUATION
→ KEEP GOING UNTIL NATIVE & COLLECT SAMPLES @ THOSE 3" INTERVALS
→ SAVE S-2 UNTIL END

0958 S-1a @ 15" BELOW ASPHALT, 3" BELOW BASE ROCK

1015 S-1b @ 21" " " 9" " " "

1028 S-1c @ 27" " 15" "

1045 MOVE TO S-4

1057 S-4a @ 9" BELOW ASPHALT, 3" BELOW BASE ROCK
1105 S-4b @ 15" " 9" "
1115 S-4c @ 21" " 15" "

1155 S-3a @ 3" BGS
1210 S-3b @ 9" BGS
1225 S-3c @ 15" BGS

S-4 → TARP BURRIED ~4" BELOW SURFACE w/ BACKFILL ON TOP
1250 S-4a @ 7" BELOW SURFACE, 3" BELOW TARP
1300 S-4b @ 13" 9"
1310 S-4c @ 19" 15"

S-5 → TARP BURRIED ~4" BELOW SURFACE w/ BACK FILL ON TOP
1340 S-5a @ 7" BELOW SURFACE, 3" BELOW TARP
1348 S-5b @ 13" 9"
1356 S-5c @ 19" 15"

1.20.05
Signature of Field Personel & Date

Environmental Review Inital Study
ATTACHMENT 8, 115 of 121
APPLICATION 05-0269

S-6 → ~9" OF BASE ROCK UNTIL NATIVE

12 S-6a @ 11" , 3"
35 S-6b @ 17" , 9"
48 S-6c @ 23" , 15"

501 JC WORK ON S-2 → HAND AUGER TO NATIVE
BEGIN CLEAN ASPHALT CUTS & COLD PATCH

ALL ASPHALT PATCHED

608 LEAVE SITE

1.20.05

1.20.05

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

SITE MAP - Sample Locations & Identification
Antonelli Begonia Gardens Nursery
2541 Capitola Road
Santa Cruz, California
(APN #029-37-118)

FIGURE 2
Job # 24038

Explanation

S-1a - Proposed Sample Locations & Identification:
approximately 1 discrete sample per 50' (see map). Samples to be obtained in accessible locations.
1) A total of approximately 25 discrete surface samples will be collected from a depth of 6 inches.
2) We will collect additional samples at depths of 12 and 18 inches as backup.

Samples labeled "a" (i.e. S-1a) have been collected from 3 - 6" bgs.
Samples labeled "b" (i.e. S-1b) have been collected from 9 - 12" bgs.
Samples labeled "c" (i.e. S-1c) have been collected from 15 - 18" bgs.

Laboratory Analyses:
- Organochlorine pesticides by EPA Method #8081 (includes DDT, DDD, DDE)

Water Production Well

K:\AJobs\AJOB\24038.begonia\FIGURE\Field use - sample I.D's.CNV

Environmental Review Inital Study

ATTACHMENT 8, 117 of 121
APPLICATION 05-0269

218

Pat Hoban

From: "Pal Hoban" <pat@weber-hayes.com>
To: "(ENTECH) Simon Hague" <shague@entechlabs.com>
cc: "WHA-Jered Chaney" <jered@weber-hayes.com>
Sent: Thursday, February 03, 2005 12:38 PM
Subject: Re: ECC tabulation & Request for additional lab testing

Site: Antonelli's Begonia Gardens, **2545** Capitola Road, Santa Cruz

Simon,

Our client OKed analysis of the following 2 samples which had Dieldrin hits in the mid-level sample:

- **S-1c @** 15-18 inches for Dieldren
- **S-23c @** 15-18 inches for Dieldren

Thank you,

Pat Hoban
Senior Geologisi

Weber, Hayes & Associates
120 Westgate Drive, Watsonville, **CA** 95076
Phone: (831) 722-3580
www.weber-hayes.com

---- Originai Message ----
%om: Pat Hoban
To: (ENTECH) Simon Haaue
:c: WHA-Jered Chaney
;ent: Tuesday, February 01, 2005 2:25 PM
;ubject: Re: EDD tabulation & Request for additional lab testing

iimon, Thanks for the MDLs Our client OKed analysis of the following 9 samples:

- 42102-002 (S-lb @ 9-12 inches) for Dieldren only
- 42102-016 (S-8b @ 9-12 inches) for Dieldren only
- 42102-022 (S-llb @ 9-12 inches) for Diedrin only
- 42102-032 (S-16b @ 9-12 inches) **for Diedrin only**
- 42102-034 (S-17b @ 9-12 inches) **for Diedrin only**
- **42102-036 (S-18b @ 9-12** inches) authorized yesterday by email please test for **DDT/DDE/DDD** + Diedrin only
- 42102-038 (S-19b @ 9-12 inches) **for Diedrin only**
- 42102-046 (S-23b @ 9-12 inches) **for Diedrin only**
- 42102-048 (S-24b @ 9-12 inches) **for Diedrin only**
- **42102-050 (S-25b @ 9-12** inches) authorized yesterday by email – please test **for DDT/DDE/DDD** only.

ıe attached table has all the hits in case you want to cross reference.

on just picked up the deeper samples in case these mid-level sampies get hits

ıanks

2/4/2005

Environmental Review **Inital Study**
ATTACHMENT 8, 4 of 21
APPLICATION 05-0269

'at Hoban
Veber, Hayes &Associates
20 Westgate Drive, Watsonville, **CA** 95076
'hone: (831) 722-3580
vww.weber-hayes.com

----- Original Message ——
From: Pat Hoban
To: LGlantz ; (ENTECH) Simon Haaue
Cc: WHA-Jered Chanev
Sent: Monday. January 31,2005 3:44 PM
Subject: EDD tabulation & Request *for* additional lab testing

Laurie, The EDD was great - saved a bunch of time from our end -attached table is wha /e slammed out wi the EDD format -- thanks.

Simon, Thanks for dealing with the emailable request. We'd like the following two samples analyzed:

- 42102-036 (S-18b @ 9-12 inches)
- 42102-050 (S-25b @ 9-12 inches)

I'll forward the deeper samples in case these 2 get cumulative hits greater than 1 mg/kg

All the best,

Pat Hoban
Senior Geologist

Weber, Hayes &Associates
120 Westgate Drive, Watsonville, CA 35076
Phone: (831) 722-3580
www.weber-hayes.com

—— Originai Message —
From: LGlantz
To: 'Pat Hoban'
Sent: Friday, January 28,2005 4:42 PM

I hope this works for you.

Laurie

ATTACHMENT B. 119 of 121
APPLICATION _____

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

Text Page 1

INDICATE ATTACHMENTS THAT APPLY
- ___ Site Map
- ___ Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: Antonelli Begonia Gardens Nursery	Date: January 13, 2005
Field Tasks: ☐ Drilling ☐ Sampling ☑ Other (see below):	Weather Conditions:
Site Inpection	Overcast & Cool
Personnel / Company On-Site: Jered Chaney (Weber, Hayes and Associates: WHAJ	

TIME:

1430	→ Leave WHA office for site.
1455	→ Arrive on-site; locate & meet Basil • Spoke w/ an Employee, says there is no such Basil. Never Heard of him. I suppose Basil will arrive shortly.
1500	• Walk through Parcel • Meet Dennis (care taker) Go over scope of work. Still waiting to meet Bill (Basil) Stieger → Has not arrived on site yet.
1520	→ Begin scoping Sample locations. Starting in previously encapsulated area.
1530	→ Basil on-site go over work scope. What to do about encapsulated soil dump. As of now there are two 50' center locations marked for this area; 714 to correspond with County & get back to Basil - Once locations have been marked for access issues, Dennis will walk through to check for utilities.
1620	→ All locations are accessible & have been marked for area. Dennis says underground utilities should be no problem. If utilities present, they are all ~2.5' bgs and would be metal. USA will not be necessary • Clean up equipment - Will return next Thurs. (1/20/05) for sampling event.
1640	- Leave site

JC
1/13/05

Environmental Review Inital Study
ATTACHMENT 8, 120 of 121
APPLICATION 05-0269

1/13/05
Signature of Field Personnel & Date

JC\Fieldlog\FORMS.xls - Standard Field Notes

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

Text Page ___/___

INDICATE ATTACHMENTS THAT APPLY

___ Site Map
___ Data Sheets
___ Geologic Logs
___ Photo Sheets
___ COC's
___ Chargeable Materials

Clien:: *Antonelli Begonia Gardens Nursery*	Date: *January 17, 2005*
Site Location: *2541 Capitoia Road, Santa Cruz, California*	*Study it:* *24038*
Field Tasks: ☐ Drilling ☐ Sampling ☑ Other (see below): *Site Inspection*	*Weather Conditions:* Sunny & Warm

1335 → Arrive Onsite
- Mark Parcel For USA alert

1345 → Site has been sprayed / marked for USA
- Call for ticket #: D17556

1355 — Leave site

JC
1/19/05

Environmental Review Inital Study
ATTACHMENT 2, 12/04/12
APPLICATION 05-0269

1/19/05
Signature of Field Personel & Date

JC\Fieldlog\FORMS.xls - Standard Field Notes

County of Santa Cruz

HEALTH SERVICES AGENCY

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060-4073

(831) 454-2022 FAX: (831) 454-3128 TDD: (831) 454-4123

ENVIRONMENTAL HEALTH

April 13,2005

Hulter Construction, Inc.
Attention: Basil Steiger/Bob Hulter
444 Scotts Valley Drive, Ste. 7B
Scotts Valley, California 95066

RE: Soil Sampling Report for 2545 Capitola Road Project, Dated April 4,2005
Submitted to this Department by Weber, Hayes & Associates

Dear Mr. Steiger and Mr. Hulter:

This department has received and reviewed the above referenced report.

We concur with the Remediation (grading) Plan as outlined in section 4.0 of the above referenced report. You may proceed with the scheduling of the proposed field activities and the coordination with this department to provide the required over-site.

If you have any questions regarding this letter, you may contact me at (831) 454-2756.

Sincerely,

Rolando Charles
EHS III

RC: cl

cc: Patrick Hoban, Weber, Hayes &Associates

Environmental Review Inital Studv
ATTACHMENT 9
APPLICATION 05-0269

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Cathleen Carr
Application No.: 05-0269
APN: 029-371-18

Date: December 5, 2005
Time: 08:37:22
Page: 1

Environmental Planning Completeness Comments

========== REVIEW ON MAY 25. 2005 BY ROBERT S LOVELAND ==========

1. A portion of the property is mapped biotic. After completing a site visit, it has been determined that the biotic resource is not present and further biotic investigation is not required.

2. The grading and soils report components of this project are being reviewed by Kent Edler

3. The soil contamination and associated issues shall be addressed by Environmental Health

========== UPDATED CN MAY 26, 2005 BY KENT M EDLER ==========

1. The soi1s report has been accepted

2. The grading plans should be revised to show pad elevations and spot elevations on the driveways, graded swales, and curb-gutter-sidewalk.
========== UPDATED ON AUGUST 15. 2005 BY ANDREA M KOCH ==========
No additional comments

========== UPDATED ON AUGUST 3C, 2005 BY KENT M EDLER ==========

Updated comments:

A winter grading permit may be considered if the following items are submitted / addressed:

1) A winter grading / erosion & sediment control plan prepared by a Certified Professional in Erosion and Sediment Control (CPESC).

2) A grading schedule showing when work will commence and when it will be completed

3) The retention of a CPESC to perform weekly erosion and sediment control inspections.

Environmental Planning Miscellaneous Comments

========== REVIEW ON MAY 26, 2005 BY KENT M EDLER ========== Conditions of Approval

1. If grading has not commenced by August 15. the start of grading must wait until April 15 of the following year.

2. Winter grading will not be allowed on this site

3. A plan review letter from the soils engineer must be submitted with the improvement plans. The letter must state that the grading and drainage plans are in conformance with the geotechnical investigation. The plan review letter must also

Environmental Review Inital Study
ATTACHMENT 10, 1 of 6
APPLICATION 05-0269

reference the latest revision date on the plans

4. The improvement plans must include details of the graded swales that run between properties.
========== UPDATED ON AUGUST 15, 2005 BY ANDREA M KOCH ==========

No additional comments

Housing Completeness Coments

========== REVIEW ON MAY 26, 2005 BY TOM POHLE ==========
NO COMMENT

In accordance with the terms of County Code 17.10, this 13 unit, subdivision has an Afforoabie Housing Obligation (AHO) equal to 1.95 units of housing. The developer is proposing to build 2 Affordable units on site. Based on plans submitted, this would meet the requirements of County Code 17.10.

========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========

The developer is proposing to create 13 residential lots for single family dwellings (SFDs) including 2 affordable homes which have been designated ontne Tentative Map as lot 2 (house plan 1A) and lot 8 (house plan 1B). The designation of 2 homes as affordable satisfies the Affordable Housing Obligation (AHO) for this project.

With respect to comparison of market rate units to the affordable units in the proposed project, the exterior design, lot sizes and living area squarefootage appear to be consistent with the requirements of 17.10 as proposed at this time.
========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========

Housing Miscellaneous Comments

========== REVIEW ON MAY 26, 2005 BY TOM POHLE ==========
NO COMMENT

County Code 17.10, as well as the Affordable Housing Guidelines, provides additional details for size of lots and units, exterior design and other requirements for Affordable units that will be reviewed as part of the Building Permit application. The developer is encouraged to review these resources, available on the County's web site, to ensure compliance with these requirements prior to submission of building plans. ========== UPOATEU ON AUGUST 11, 2005 BY TOM POHLE ==========
========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========

Long Range Planning Completeness Comments

========== REVIEW ON MAY 9, 2005 BY GLENDA L HILL ==========
NO COMMENT

Long Range Planning Miscellaneous Comments

---------- REVIEW ON MAY 9. 2005 BY GLENDA L HILL ==========
========== UPDATED ON MAY 9, 2005 BY GLENDA L HILL ==========
NO COMMENT

Dpw Drainage Completeness Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON MAY 31, 2005 BY DAVID W SIMS ==========
General Plan policies: 7.23.1 New Development 7.23.2 Minimizing Impervious Surfaces 7.23.3 On-Site Stormwater Detention 7.23.4 Downstream Impact Assessments 7.23.5 Control Surface Runoff

An engineered drainage plan was submitted with the application, and was reviewed for completeness of discretionary development, and compliance with stormwater management controls and County policies listed above. The plan was found to need the following additional information and revisions prior to approving discretionary stage Stormwater Management review.

Item 1) The storm drainage calculation summary on sheet TM4 is not sufficient to meet requirements. Please provide a complete detailed analysis of the existing and proposed site hydrology inclusive of sub-area boundaries and assigned runoff coefficients for the different surfaces on the project site. It appears that a large percentage of the structures that cover the existing lot are made from shade mesh stretched over frames, with containerized nursery plants underneath. Such structures are pervious, and the plants would intercept and slow runoff. The use of an aggregate 0.7 runoff coefficient for the existing condition may be too high. Accurate assessment is needed for establishing runoff impacts and future fees. Depending on the results of the detailed calculations other requirements to address policies 7.23.1, 7.23.2 and 7.23.3 may be made in subsequent routings.

Item 2) Indicate on the plans the manner in which building downspouts will be discharged.

Item 3) Please add a note stating all impervious or compacted surfaces to be demolished and returned to landscaping shall be decompacted by ripping or turning the soil prior to placement of additional fill. Grading and fill placed in future landscape areas shall be noted to receive reduced compaction from that used for structural foundation areas. It appears thate rear yard areas of most of the homes comprise a central area of the parcel that can be zoned for minimal compactive disturbance. Please delineate this area as a temporarily protected low construction compaction zone on the plans and note it specifically.

Item 4) ,Detention will be required only to the extent that pre-development runoff rates cannot be maintained through other applied measures. and where drainage problems are not resolved. See item 1.

Item 5) Offsite assessment is required of each of the two drainage routes from the inlets at the property corners to each outfall location at Rodeo Gulch. Provide each

assessment on fully completed County standard form SD-2. along with all supporting area maps and coefficient estimates clearly delineated. In the last two decades several tracts have made additions to the lower end of this stormdrain system, with all tracts engineered by Ifland Engineers. If partial or complete assessment already exists, it may be used as supporting documentation so long as it is reviewed, fully updated and reflects this project proposal and any other surrounding development changes.

Item 6) Provide a typical section detail of the graded swale used on the lots. A shallow broad bottom swale integrated within the landscaping is recommended to improve filtration and flow delay. Provide swale flowline elevations in plan view.

item 7) Provide a gutter capacity check for the north gutter on Byer Road in front of lots 1 and 2.

Item 8) Provide finished floor elevation for the homes and garages

Item 9) Onsite water quality treatment is required for the subdivision. It is not apparent how this is planned for the site. Maintenance aqreements are likely. All driveways appear to discharge oil contaminants to the street. which is not acceptable. Please address

Item 10) Please provide a note on the plans for permanent bold markings at each corner inlet that read: "NO DUMPING - DRAINS TO BAY".

Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON AUGUST 12, 2005 BY DAVID W SIMS =========
2nd Routing:

Prior Item 1) Complete. The development runoff calculations submitted were acceptable for the discretionary level of review. The post-development impervious areas were roughly estimated and are sufficient for answering mitigation requirements. All impervious areas will need to be more accurately shown and determined by the applicant for fee accounting purposes at the time of filing the final improvement plans.

Prior Item 2) Incomplete. The proposal to pipe all roof runoff directly to the street is not accepted since this was not a pre-existing method of site discharge. Discharging downspouts into the yard landscape would be acceptable without further mitigation. Any proposal to pipe roof runoff will require some form of effective mitigation other than detention prior to discharge offsite. The roof discharge method is to be shown and noted on the civil drainage plans. Please revise.

Prior Item 3) Incomplete. Grading and fill placed in future landscape areas shall be ncted to receive reduced compaction from that used for structural foundation areas. Specifically note this as a separate compaction specification on the civil plans. The civil plans need to indicate by what method the low compaction zone will be temporarily protected from construction impacts. To be approved. the method shall prevent, by some type of effective barrier, all construction equipment from traveling over this zone once grading has been completed in these reduced compaction land-

scape areas. Please revise.

Prior Item 4) Complete. Calculations from item #1 have demonstrated that detention will not be necessary to mitigate runoff impacts.

Prior item 5) Incomplete. Historical offsite design calculations for the southern drainage are accepted. Offsite assessment of the northern drainage was not provided and is still required, Provide the northern drainage assessment on fully completed County standard form SO-2, along with all supporting area maps and coefficient estimates clearly delineated. Evaluate and describe the adequacy of all open ditch sections through which project runoff flows.

Prior Item 6) Complete

Prior Item 7) Complete

Prior Item 8) Complete.

Prior Item 9) Incomplete. Onsite water quality treatment is required for the subdivision. It is not apparent how this is plannec for the site. Maintenance agreements are likely. All driveways appear to discharge oil contaminants to the street, which is not acceptable. Please address.

Prior Item 10) Complete. ========= UPDATED ON SEPTEMBER 29, 2005 BY DAVID W SIMS =========

3rd Routing: Approved

Prior Items 1 & 2) Complete

Prior Item 3) Complete. Additional requirements deferred to miscellaneousiten A.

Prior Item 4) Complete

Prior Item 5) Complete. Additional requirements deferred to miscellaneous item B

Prior Items 6, 7 & 8) Complete

Prior Item 9) Complete. Onsite water quality treatment is provided by diverting driveway runoff into front yard landscaping for filtration.

Dpw Drainage Miscellaneous Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========= REVIEW ON MAY 31, 2005 BY DAVID W SIMS =========

A) Please provide evidence of permits for all structures claimed for impervious area fee offset.

B) This project will require inspection and plan signature by the Director of Public Works. Please provide the necessary cost estimates and signature blocks at the appropriate staqe.

Construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development or sale must obtain the Construction Activities Storm Water General NPDES Permit from the State Water Resources Control Board. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. For more information see:
http://www.swrcb.ca.gov/stormwtr/constfaq.html

A drainage impact fee will be assessed on the net increase in impervious area. The fees are currently $0.85 per square foot, and are assessed upon permit issuance. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

Because this application is incomplete in addressing County development policies. resulting revisions and additions will necessitate further review comment and possibly different or additional requirements. The applicant is subject to meeting all future review requirements as they pertain to the applicant's changes to the proposed plans.

All resubmittals shall be made through the Planning Department. Materials left with Public Works may be returned by mail, with resulting delays. ========= UPDATED ON AUGUST 12, 2005 BY DAVID W SIMS =========
NO COMMENT
========= UPDATED ON SEPTEMBER 29, 2005 BY DAVID W SIMS =========
A) Specifically note a separate compaction specification on the civil plans for the landscape grading areas in addition to the grading equipment method described.

B) The engineer's assessment of the northern drainage identifies a ditch section that requires cleanout. This work needs to be shown and noted on the plans prior to completion of the improvement plans.

C) Note the use of Co. standard detail for the under-sidewalk drains

D) Provide a design depth for the driveway swales, and note adjoining landscape areas to be graded to allow dispersal and spreading of runoff into these soil areas such that filtration actually does occur. Revise distance or direction of runoff for several of the lots so that there is maximized separation of the driveway from the area inlet. Lot 2 is the worst-case example.

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON MAY 9, 2005 BY DEBBIE F LOCATELLI =========
No comment, project involves a subdivision or MLD.

Dpw Driveway/Encroachment Miscellaneous Comments

========= REVIEW ON MAY 9, 2005 BY DEBBIE F LOCATELLI =========
No comment.

Dpw Road Engineering Completeness Comments

========== REVIEW ON MAY 25, 2005 BY GREG J MARTIN ==========
Along Maciel Avenue, the width of the street is recommended to be 36 feet from curb face to curb face. Along Encina Drive, the width of the street is recommended to be 36 feet from the curb face to the edge of the existingswale. We recommend moving the driveways for Lot 1 and Lot 10 to Byer Roadd Encina Drive respectively. At the intersection of Maciel Avenue and Encina Drive and the intersection Willa Way and Encina Drive please show additional existing topography sufficiently to define the intersections.

A landscaping. irrigation, and signs and striping plan shall be required.

Full cross sections are required on Maciel Avenue and Encina Drive. Profiles of flowlines on both sides of Maciel Avenue and Encina Drive are required.

The development is subject Live Oak Transportation Improvement (TIA) fees at a rate of $4000 for each new lot created. The number of new lots is i3 new lots minus the existing lot which equals 12 lots. The fee is calculated12 lots multiplied by $4000/lot for a total of $48,000. The total TIA fee of $48,000 is to be split evenly between transportation improvement fees and roadside improvement fees.

If you have any questions please contact Greg Martin at 831-454-2811. ========== UPDATED ON AUGUST 5, 2005 BY GREG J MARTIN ==========
If possible, the driveway for Lot 3 should be shifted so that the driveway minimum of eight feet from the tangent of the curb return for the intersection.

Install a stop sign. stop legend, and stop bar on Encina Drive at its intersection with Willa, Way.

The new curb returns should have a radius of 20 feet for the face of curb

The kink in the curb face along Maciel to accommodate the transition from a 40 foot wide road to a 36 foot wide road is not acceptable. Either the return at the corner of Byer Road and Maciel Avenue shall need to be reconstructed or the transition should occur from the return to the driveway for Lot 13. The sidewalk transition should be standard, avoiding a narrow iandscaped areas.

Trees shown in the driveways should be identified for removal.

The new curb return at the corner of Willa Way and Encina Drive shall require a saw-cut offset 2 feet from the new lip of gutter. The shaded area denoting new pavement should reflect this.

There should be stationing on the plan view to correspond with the profile information presented for Maciel Avenue and Encina Drive. The existing ground should be shown on each profile. Each profile should include a portion of existing flowlines to show that the profile transitions are smooth.

Actual cross sections should be shown for Maciel Avenue and Encina Drive.

If you have any questions please call Greg Martin at 831-454-2811. ========== UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN ==========

CITY OF
SANTA CRUZ

WATER DEPARTMENT

809 Center Street, Room 102 Santa Cruz CA 95060 Phone (831) 420-5200 Fax (831) 420-5201

March 30,2005

Bob Hulter
Hulter Construction
4444 Scotts Valley Drive Sutie 7-B
Scotts Valley CA 95066

Re: APN 029-371-18, 2545 Capitola Road proposed 13 lot subdivision

Dear Mr. Hulter:

This letter is to advise you that the proposed development is located within the service area of the Santa Cruz Water Department and potable water is currently available for normal domestic use and fire protection. Service will be provided to each and every lot of the development upon payment of the fees and charges in effect at the time of service application and upon completion of the installation, at developer expense, of any water mains, service connections, fire hydrants and other facilities required for the development under the rules and regulations of the Santa Cruz Water Department. The development will also be subject to the City's Landscape Water Conservation requirements.

At the present time

the required water system improvements are not complete; and
financial arrangements have not been made to the satisfaction of the City to guarantee payment of all unpaid claims.

This letter will remain in effect for a period of *two* years from the above date. It should be noted, however, that the City Council may elect to declare a moratorium on new service connections due to drought conditions or other water emergency. Such a declaration would supersede this statement of water availability,

If you have any questions regarding service requirements, please call the Engineering Division at (831) 420-5210. If you have questions regarding landscape water conservation requirements, please contact the Water Conservation Office at (831) 420-5230.

Sincerely,

Bill Kocher
Director

Environmental Review Inital Study
ATTACHMENT 11
APPLICATION 05-0269

BK/
P:\WTEN\EngTech\Letter Boilerplates\Water Availability.doc
Cc: SCWD Engineering

Santa Cruz County Sanitation District

701 OCEAN STREET, SUITE 410, SANTA CRUZ, CA 950604073
(831) 454-2160 FAX (631)454-2089 TDD: (831) 454-2123

THOMAS L BOLICH, DISTRICT ENGINEER

April 29, 2005

HUTLER CONSTRUCTION
4444 SCOTTS VALLEY DRIVE, #7B
SCOTTS VALLEY CA 95066

SUBJECT: SEWER AVAILABILITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT:

APN: 029-371-18 APPLICATION NO.: N/A
PARCEL ADDRESS: 2545 CAPITOLA ROAD, SANTA CRUZ
PROJECT DESCRIPTION: OWNER PROPOSES TO SUBDIVIDE AN EXISTING LOT AND CONSTRUCT 13 RESIDENTIAL UNITS.

Sewer service is available for the subject development upon completion of the following conditions. This notice is effective for one year from the issuance date to allow the applicant the time to receive tentative map, development or other discretionary permit approval. If after this time frame this project has not received approval from the Planning Department, a new sewer service availability letter must be obtained by the applicant. Once a tentative map is approved this letter shall apply until the tentative map approval expires.

Proposed location of on-site sewer lateral(s), clean-out(s), and connection(s) to existing public sewer must be shown on the plot plan of the building permit application.

Existing lateral(s) must be properly abandoned (including inspection by District) prior to issuance of demolition permit or relocation or disconnection of structure. An abandonment permit for disconnection work must be obtained from the District.

Department of Public Works and District approval shall be obtained for an engineered sewer improvement plan, showing on-site and off-site sewers needed to provide service to each lot or unit proposed, before sewer connection permits can be issued. The improvement plan shall conform to the *County's* "Design Criteria" and shall also show any roads and easements. Existing and proposed easements shall be shown on any required Final Map. If a Final Map is not required, proof of recordation of existing or proposed easement is required.

The plan shall show all existing and proposed plumbing fixtures on floor plans of building application. Completely describe all plumbing fixtures according to table 7-3 of the uniform plumbing code.

Environmental Review Inital Study
ATTACHMENT 12, Lot 3
APPLICATION

z3z

Other: The use of cleanouts will not be allowed. Replace with a new manhole.
Revise 172 lineal feet of sewer main with 8-inch pipe.
All laterals shall have a minimum 2.0% slope.
A backflow prevention device may be required on each lateral.

Other: No downstream capacity problem or other issue is known at this time. However, downstream sewer requirements will again be studied at time ***of*** Planning Permit review, at which time the District reserves the right to add or modify downstream sewer requirements.

Yours truly,

THOMAS L. BOLICH
District Engineer

By: Rachel Lather

Rachel Lather-Hidalgo
Sanitation Engineering Staff

BB:abc/343.wpd

c: Owner: ANTONELLI FAMILY
2545 CAPITOLA ROAD
SANTA CRUZ CA 95062

Survey

(REV. 3-01)

Environmental Review Inital Study
ATTACHMENT 12, 2 of 3
APPLICATION 05-0269

Santa Cruz County Sanitation District

701 OCEAN STREET, SUITE 410, SANTA CRUZ, CA 950604073
(831) 454-2160 FAX (831) 454-2089 TDD: (831) 454-2123

THOMAS L. BOLICH, DISTRICT ENGINEER

April 21, 2005

HUTLER CONSTRUCTION, INC.
4444 SCOTTS VALLEY DRIVE, #7B
SCOTTS VALLEY CA 95066

SUBJECT: SEWER AVAILABILITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT:

APN: 029-371-18	APPLICATION NO.: N/A
PARCEL ADDRESS:	2545 CAPITOLA ROAD, SANTA CRUZ CA 95062
PROTECT DESCRIPTION	OWNER PROPOSES TO SUBDIVIDE AN EXISTING LOT AND CONSTRUCT 13 RESIDENTIAL UNITS.

Sewer service would be available for the subject development upon completion of an approved preliminary sewer design submitted as part of a tentative map, development or other discretionary permit approval process. Please note that this notice does not reserve sewer service availability Only upon completion of an approved preliminary sewer design submitted as part of a tentative map development or other discretionary permit approval process shall the District reserve sewer service availability.

Department of Public Works and District approval shall be obtained for an engineered sewer improvement plan, showing on-site and off-site sewers needed to provide service to each lot or unit proposed, before sewer connection permits can be issued. The improvement plan shall conform to the County's "Design Criteria" and shall also show any roads and easements. Existing and proposed easements shall be shown on any required Final Map. If a Final Map is not required, proof of recordation of existing or proposed easement is required.

No downstream capacity or other issue is known at this time. However, downstream sewer requirements will again be studied at time of Planning Permit review, at which time the District reserves the right to add or modify downstream sewer requirements.

Yours truly,

THOMAS L. BOLICH
District Engineer

By: Rachél Lather

Rachél Lather-Hidalgo
Sanitation Engineer

BB:abc/329

c: Property Owner: ANTONELLI FAMILY
2545 CAPITOLA ROAD
SANTA CRUZ CA 95062

(REV. 3-01)

Environmental Review Inital Study
ATTACHMENT 12, 3 of 3
APPLICATION 04-0266

California Regional Water Quality Control Board
Central Coast Region

Alan C. Lloyd, Ph.D.
Agency Secretary

Internet Address: http://www.waterboards.ca.gov/centralcoast
895 Aerovista Place, Suite 101, San Luis Obispo, California 93401-7906
Phone (805) 549-3147 • FAX (805) 543-0397

Arnold Schwarzenegger
Governor

January 24, 2006

Tom Burns; Ken Hart and Paia Levine
County of Santa Cruz Planning Department
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060

Dear Mr. Bums, Mr. Hart and Ms. Levine:

APN 029-371-18, HULTER BEGONIA GARDEN LAND DIVISION, INTERSECTION OF BYER ROAD AND MARCIEL AVENUE, LIVE OAK AREA BETWEEN CITIES OF SANT.4 CRUZ AND CAPITOLA, SANTA CRUZ COUNTY, CA (SITE); PESTICIDE CONTAMINATION.

Reference: State Clearinghouse Number 2005122117. Santa Cruz County Application Number 05-0269, December 12, 2005, *Environmental Review Initial Study.* associated *Notice of Environmental Review Period* and State Clearinghouse cover sheets (Initial Study)

Thank you for the opportunity to comment on the Initial Study. Our comments primarily regard Site water quality aspects and not human or ecological health risk. Some concerns herein may have already been resolved and some may be outside the scope of the current project. though these factors are not indicated by the Initial Study.

BACKGROUND

Our comments are based on the following understanding of the project. as described by the Initial Study and conversations with Santa Cruz County staff.

The project entails residential development of the 2.43 acre Site. which housed a commercial nursery from the 1930s until 2005. Project Phase 1 addresses remediation of Site contaminated soils by excavation and offsite disposal and Phase 2 addresses Site development. Completion or closure of Phase 1 must be approved by Santa Cruz County Environmental Health Services before the project may proceed to Phase 2. This letter comments on Phase 1, environmental remediation.

Site contaminated soil, defined by exceedance of cleanup levels: will be remediated by excavation and offsite disposal during Phase 1. Soils remaining onsite will be considered uncontaminated and will not require containment, nor will conditions related to remaining soil contaminants be applied. Phase 2 includes placement of imported fill for development. but that fill is not a condition of Phase 1 closure and is not a required cap or containment for residual soil contaminants. Soil cleanup levels therefore separate soils to be excavated and removed from "clean" soils left onsite with no conditions related to residual contaminants.

Santa Cruz County established Site soil cleanup levels of 1,000 ppb DDT, DDD and/or DDE (DDX) and 30 ppb dieldrin. Soils exceeding those criteria must be removed and disposed at a landfill and other soils are approved to remain onsite with no conditions or limitations.

Environmental Review Inital Stu
ATTACHMENT 13, 1 of 5
APPLICATION 05-0269

The Site is approximately 425 feet from Rodeo Gulch, which then flows approximately 1 mile to Corcoran Lagoon and the Pacific Ocean. By design, Site runoff apparently flows to Rodeo Gulch. Depth to groundwater underlying the Site is unknown, though presumed shallow.

The September 8, 1994, Water Quality Control Plan, Central Coast Basin (Basin Plan) designates beneficial uses of surface waters. Basin Plan Table 2-1, *"Identified Uses of Inland Surface Waters"*, designates Rodeo Gulch as municipal and domestic supply, among many other beneficial uses. 65 Federal Register 31682-31719 (May 18, 2000): adding Section 131.38 to 40 CFR, known as the California Toxics Rule (CTR), also contains applicable water quality standards for inland waters. The CTR establishes the following human health: consumption of water and organisms standards for DDX in California inland waters and states those standards apply to inland waters designated as municipal and domestic supply. Thus the following standards, among others. apply to Rodeo Gulch. The standards apply to the total concentration (dissolved plus suspended fractions) present in water.

Compound	CTR Standard (ug/L)
4,4'- DDT	.00059
4,4'- DDE	.00059
4,4'- DDD	.00083
Dieldrin	.00014

Additionally, because DDT, DDE and DDD manifest their toxic effects on the same organ systems or through similar mechanisms, in measuring their toxicity they are essentially considered to be the same chemical and have additive toxicity. Thus the standard for DDX is not the sum of the DDT. DDE and DDD standards but is equal to the standard for any one of the compounds, with minor mathematical adjustment because the three standards are slightly different. To address this additive toxicity, the following may be applied. Units are ug/L.

measured DDT/.00059 + measured DDEl.00059 + measured DDD/00083 = n
n < 1 is acceptable
n = or > 1 is unacceptable

CONCERYS

1. Site Soil cleanup levels established for DDX and dieldrin do not appear adequately water protective. Pursuant to Initial Study requirements, soils with contaminant concentrations up to almost 10,000.000 times water standards (i.e., 1000 ppb DDT cleanup level in soil compared to .00059 ppb DDT standard in water) may remain onsite with no containment or restriction. Such soils will cause exceedance of water quality standards in Rodeo Gulch if. for example, during heavy rains, contaminated soils exposed at the Site surface erode and migrate as entrained sediment the short distance from the Site to the Gulch and comprise more than one ten millionth of the water column there, That appears to be a likely scenario.

   Site soil cleanup levels should be reduced to a concentration that ensures soils remaining onsite will not cause water quality standard exceedances. It may be necessary to impose a Site soil cleanup level of non detect for DDX, bearing in mind analytical detection limits for DDX in soil are on the order of single to tens of ppb, roughly 10,000 to 100,000 times the water quality standard. Alternatively, DDX-containing soils may he disposed onsite with binding conditions imposed, such as proper capping and containment, runon/runoff controls, maintenance, monitoring, deed notice and restriction, etc.

Environmental Review Inital Study
ATTACHMENT 13, 2 of 5
APPLICATION 05-0163

POR. N.W. 1/4 SEC. 16,
T.11S., R.1W. M.D.B. & M.

29-37

Tax Area Code
82-040

ASSESSOR'S PARCEL MAP

237

EXHIBIT E

CAPITOLA GARDENS TR. # 1328
97MB33
4/17/00

WILLA WY

CAPITOLA RD

ANTONELLI CT

BYER DR

MACIEL AVE

ENCINA DR

1' NON ACCESS STRIP

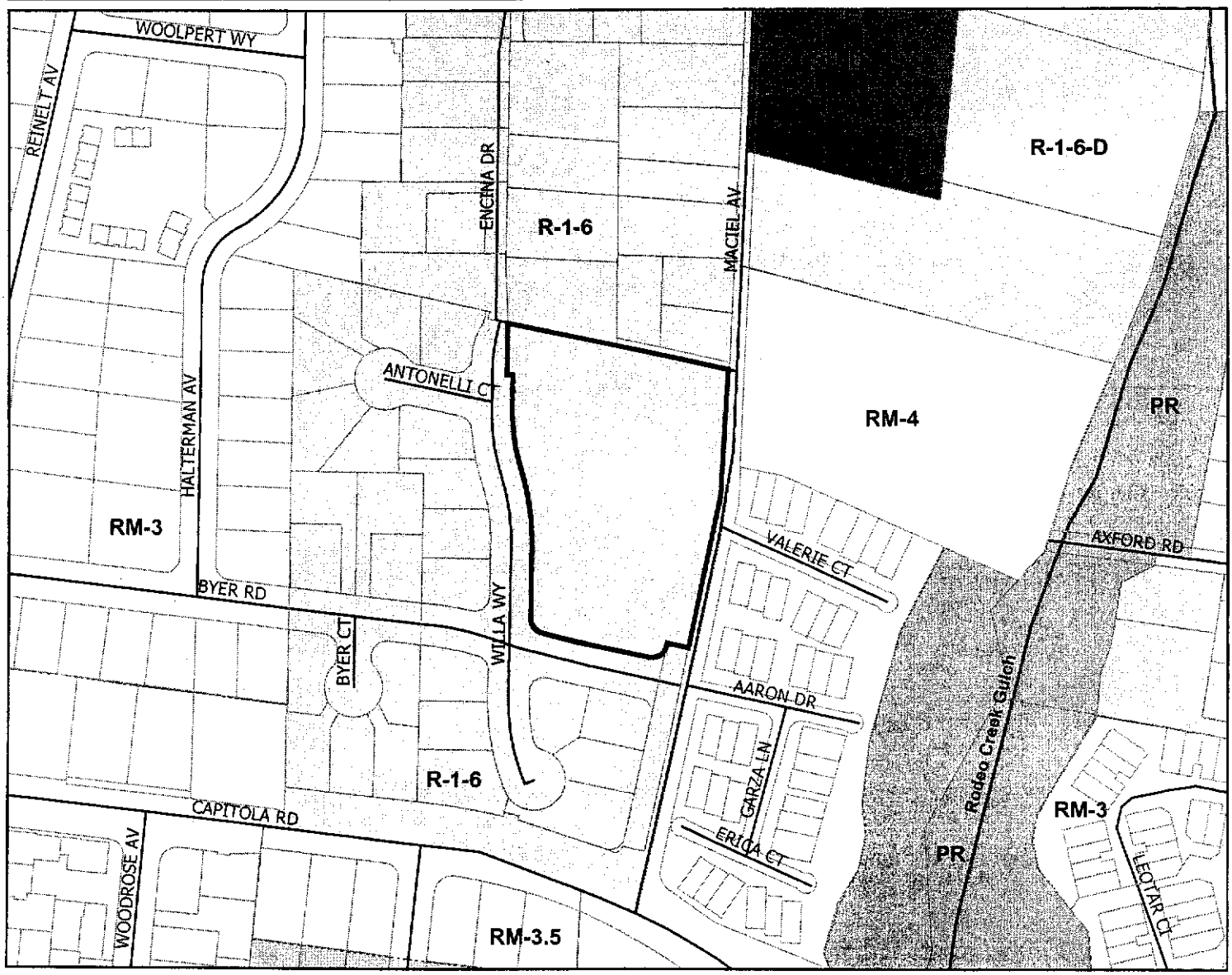
6' P.U.E.

Subject Parcel

Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 29-37
County of Santa Cruz, Calif.
June, 2000

Zoning Map



0 185 370 740 1,110 1,480 Feet

Legend

- APN029-371-18
- Assessors Parcels
- PERENNIAL STREAM
- Streets
- PARK (PR)
- RESIDENTIAL-MULTI FAMILY (RM)
- RESIDENTIAL-SINGLE FAMILY (R-1)
- SPECIAL USE (SU)

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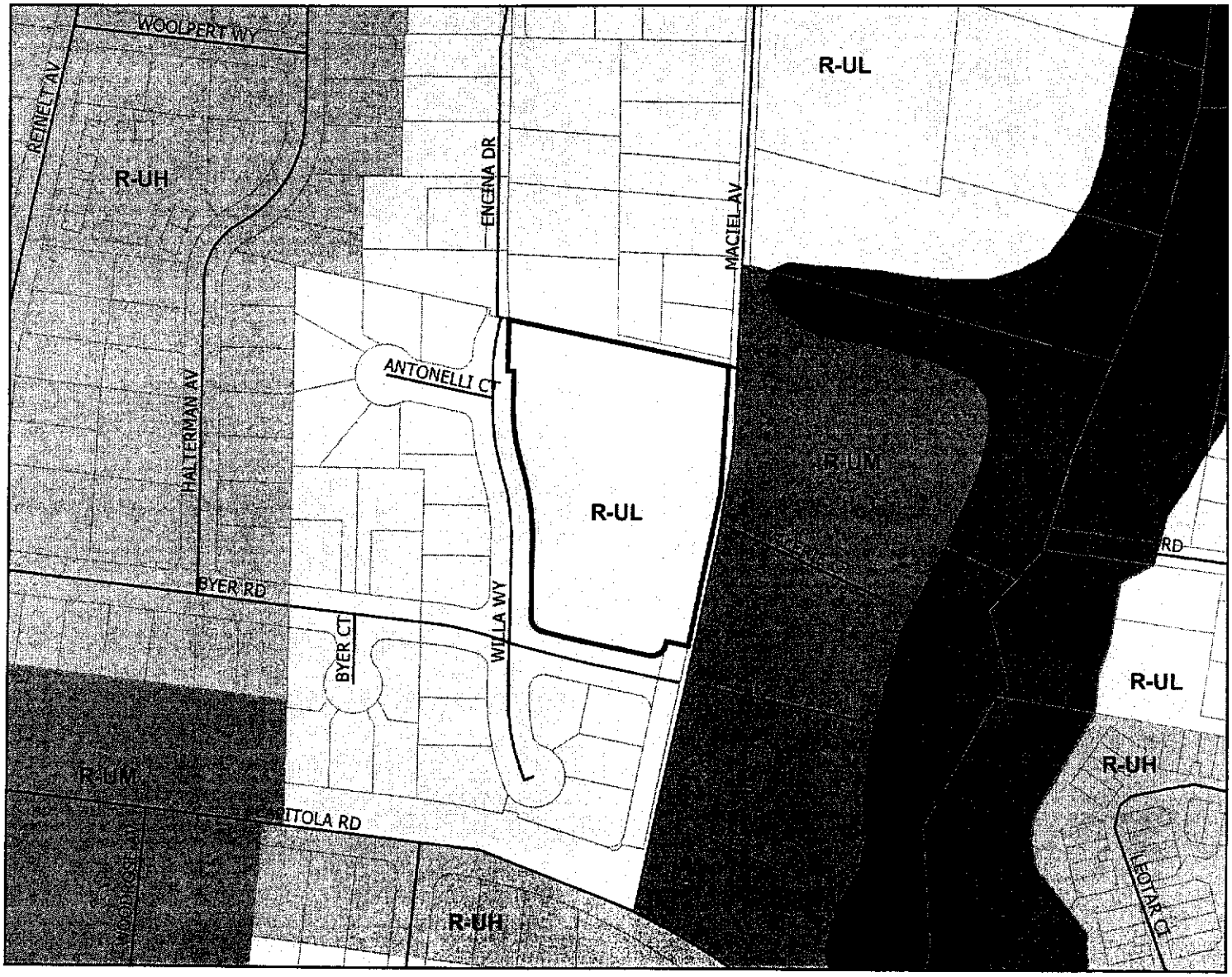
Map Created by
County of Santa Cruz
Planning Department
May 2005

238

EXHIBIT F

General Plan Designation Map



0 185 370 740 1,110 1,480 Feet

Legend

- APN029-371-18
- Assessors Parcels
- PERENNIAL STREAM
- Streets
- Residential - Urban Low Density (R-UL)
- Residential - Urban Medium Density (R-UM)
- Residential - Urban High Density (R-UH)
- Urban Open Space (0-U)

N
W E
S

Map Created by
County *of* Santa Cruz
Planning Department
May 2005

EXHIBIT F

CITY OF
SANTA CRUZ
WATER DEPARTMENT

809 Center Street, Room 102 Santa Cruz CA 95060 Phone (831) 420-5200 Fax (831) 420-5201

March 30,2005

Bob Hulter
Hulter Construction
4444 Scotts Valley Drive Sutie 7-B
Scotts Valley CA 95066

Re: **APN 029-371-18, 2545 Capitola Road proposed 13 lot subdivision**

Dear Mr. Hulter:

This letter is to advise you that the proposed development is located within the service area of the Santa Cruz Water Department and potable water is currently available for normal domestic use and fire protection. Service will be provided to each and every lot of the development upon payment of the fees and charges in effect at the time of service application and upon completion of the installation, at developer expense, of any water mains, service connections, fire hydrants and other facilities required for the development under the rules and regulations of the Santa Cruz Water Department. The development will also be subject to the City's Landscape Water Conservation requirements.

Ai the present time:

the required water system improvements are not complete; and
financial arrangements have not been made to the satisfaction of the City to guarantee payment of all unpaid claims.

This letter will remain in effect for a period of two years from the above date. It should be noted, however, that the City Council may elect to declare a moratorium on new service connections due to drought conditions or other water emergency. Such a declaration would supersede this statement of water availability.

If you have any questions regarding service requirements, please call the Engineering Division at (831) 420-5210. If you have questions regarding landscape water conservation requirements, please contact the Water Conservation Office at (831) 420-5230.

Sincerely,

Bill Kocher
Director

BK/
P:\WTEN\EngTech\Letter Boilerplates\Water Availability.doc
Cc: SCWD Engineering

EXHIBIT G

Santa Cruz County Sanitation District

701 OCEAN STREET, SUITE 410, SANTA CRUZ, CA 95060-4073
(831) 454-2160 FAX (831) 454-2089 TDD: (831) 454-2123

THOMAS L. BOLICH, DISTRICT ENGINEER

April 29, 2005

HUTLER CONSTRUCTION
4444 SCOTTS VALLEY DRIVE. #7B
SCOTTS VALLEY CA 95066

SLBJECT: SEWER AVAILABILITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT:

APN: 029-371-18 .APPLICATION NO.: N/A

PARCEL ADDRESS: 2545 CAPITOLA ROAD, SANTA CRUZ

PROJECT DESCRIPTION: OWNER PROPOSES TO SUBDIVIDE AN EXISTING LOT AND CONSTRUCT 13 RESIDENTIAL UNITS.

Sewer service is available for the subject development upon completion of the following conditions. This notice is effective for one year from the issuance date to allow the applicant the time to receive tentative map, development or other discretionary permit approval. If after this time frame this project has not received approval from the Planning Department, a new sewer service availability letter must be obtained by the applicant. Once a tentative map is approved this letter shall apply until the tentative map approval expires.

Proposed location of on-site sewer lateral(s), clean-out(s), and connection(s) to existing public sewer must he shown on the plot plan of the building permit application.

Existing lateral(s) must he properly abandoned (including inspection by District) prior to issuance of demolition permit or relocation or disconnection of structure. An abandonment permit for disconnection work must be obtained from the District.

Department of Public Works and District approval shall be obtained for an engineered sewer improvement plan, showing on-site and off-site sewers needed to provide service to each lot or unit proposed, before sewer connection permits can be issued. The improvement plan shall conform to the County's "Design Criteria" and shall also show any roads and easements. Existing and proposed easements shall be shown on any required Final Map. If a Final Map is not required, proof of recordation of existing or proposed easement is required.

The plan shall show all existing and proposed plumbing fixtures on floor plans of building application. Completely describe all plumbing fixtures according to table 7-3 of the uniform plumbing code.

EXHIBIT G

Other: The use of cleanouts will not be aliowed. Replace with a new manhole.
Revise 172 lineal feet of sewer main with 8-inch pipe.
All laterals shall have a minimum 2.0% slope.
A backflow prevention device may be required on each lateral.

Other: No downstream capacity probiem or other issue is known at this time. However, downstream sewer requirements will again be studied at time of Planning Permit review, at which time the District reserves the right to add or modify downstream sewer requirements.

Yours truly,

THOMAS L. BOLICH
District Engineer

By: Rachel Lather

Rachel Lather-Hidalgo
Sanitation Engineering Staff

BB:abc/343.wpd

c: Owner: ANTONELLI FAMILY
2545 CAPITOLA ROAD
SANTA CRUZ CA 95062

Survey

(REV. 3-01)

EXHIBIT G

Santa Cruz County Sanitation District

701 OCEAN STREET, SUITE 410, SANTA CRUZ, CA 950604073
(831) 454-2160 FAX (831) 454-2089 TDD: (831) 454-2123

THOMAS L. BOLICH. DISTRICT ENGINEER

April 21, 2005

HUTLER CONSTRUCTION, WC.
4444 SCOTTS VALLEY DRIVE, #7B
SCOTTS VALLEY CA 95066

SUBJECT: SEWER AVAILABILITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT:

APN: 029-371-18 APPLICATION NO.: N/A
PARCEL ADDRESS: 2545 CAPITOLA ROAD, SANTA CRUZ CA 95062
PROJECT DESCRIPTION: OWNER PROPOSES TO SUBDIVIDE AN EXISTING LOT AND CONSTRUCT 13 RESIDENTIAL UNITS.

Sewer service would be available for the subject development upon completion of an approved preliminary sewer design submitted as part of a tentative map, development or other discretionary permit approval process, Please note that this notice does not reserve sewer service availability. Only upon completion of an approved preliminary sewer design submitted as part of a tentative map development or other discretionary permit approval process shall the District reserve sewer service availability.

Department of Public Works and District approval shall be obtained for an engineered sewer improvement plan, showing on-site and off-site sewers needed to provide service to each lot or unit proposed, before sewer connection permits can be issued. The improvement plan shall conform to the County's "Design Criteria" and shall also show any roads and easements. Existing and proposed easements shall be shown on any required Final Map. If a Final Map is not required, proof of recordation of existing or proposed easement is required.

No downstream capacity or other issue is known at this time. However, downstream sewer requirements will again be studied at time of Planning Permit review, at which time the District reserves the right to add or modify downstream sewer requirements.

Yours truly,

THOMAS L. BOLICH
District Engineer

By: Rachel Lather
Rachel Lather-Hidalgo
Sanitation Engineer

BB:abc/329

c: Property Owner: ANTONELLI FAMILY
2545 CAPITOLA ROAD
SANTA CRUZ CA 95062

(REV 3-01)

243

EXHIBIT G

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: 05-0269

Date: August 15,2005

Tu: Cathleen Carr, Projec! Planner

From: Larry Kasparowitz, Urban Designer

Re: Design Review for a subdivision at Maciel Road, Santa Cruz (Donna Strohbeen / owner, Hulter Construction / applicant)

COMPLETENESS ISSUES

(NOTE: the Project Planner should include these as items required for completeness of the application)

- *The renderings do not show material indications.*

URBAN DESIGNER'S COMMENTS:

(NOTE: the Project Planner should consider these items as suggestions to improve the project and should ask the applicant to address them in a resubmittal letter/plan.)

No more than two materials per elevation (see Elevation 4AR). Include elevations withjust one material

- *Porches should be more than minimal spaces (all hut !A, 3AS and 3C).*

I would suggest the designer look at limiting the use of shutters. Perhaps shutters should only happen on the upper floor? Shutter corners should not bump into roofs (2A, 2B, 2BR).

EXHIBIT H

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Cathleen Carr
Application No.: 05-0269
APN: 029-371-18

Date: October 3, 2005
Time: 11:24:48
Page: 1

Environmental Planning Completeness Comnents

========== REVIEW ON MAY 25, 2005 BY ROBERT S LOVELAND ==========

1. A portion of the property is mapped biotic. After completing a site visit, it has been determined that the biotic resource is not present and further biotic investigation is not required.

2. The grading and soils report components of this project are being reviewed by Kent Edler

3. The soil contamination and associated issues shall be addressed by Environmental Health.

========== UPDATED ON MAY 26. 2005 BY KENT M EDLER ==========

1. The soils report has been accepted.

2. The grading plans should be revised to show pad elevations and spot elevations on the driveways, graded swales, and curb-gutter-sidewalk.
========== UPDATED ON AUGUST 15, 2005 BY ANDREA M KOCH ==========
No additional comments,

========== UPDATED ON AUGUST 30. 2005 BY KENT M EDLER ==========

Updated comments:

A winter grading permit may be considered if the following items are submitted / addressed:

1) A winter grading / erosion & sediment control plan prepared by a Certified Professional in Erosion and Sediment Control (CPESC).

2) A grading schedule showing when work will commence and when it will be completed.

3) The retention of a CPESC to perform weekly erosion and sediment control inspections.

Environmental Planning Miscellaneous Coments

========== REVIEW ON MAY 26, 2005 BY KENT M EDLER ========== Conditions of Approval:

1. If grading has not commenced by August 15, the start *of* grading must wait until April 15 of the following year.

2. Winter grading will not be allowed on this site.

3. A plan review letter from the soils engineer must be submitted with the improvement plans. The letter must state that the grading and drainage plans are in conformance with the geotechnical investigation. The plan review letter must also

EXHIBIT H

reference the latest revision date on the plans

4. The improvement plans must include details of the graded swales that run between properties.
========== UPDATED ON AUGUST 15, 2005 BY ANDREA M KOCH ==========

No additional comments.

Housing Completeness Comments

========== REVIEW ON MAY 26, 2005 BY TOM POHLE ==========
NO COMMENT

In accordance with the terms of County Code 17.10, this 13 unit subdivision has an Affordable Housing Obligation (AHO) equal to 1.95 units of housing. The developer is proposing to build 2 Affordable units on site. Based on plans submitted, this would meet the requirements of County Code 17.10.

========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========

The developer is proposing to create 13 residential lots for single family dwellings (SFDs) including 2 affordable homes which have been designated on the Tentative Map as lot 2 (house plan 1A) and lot 8 (house plan 1B). The designation of 2 homes as affordable satisfies the Affordable Housing Obligation (AHO) for this project.

With respect to comparison of market rate units to the affordable units in the proposed project, the exterior design, lot sizes and living area squarefootage appear to be consistent with the requirements of 17.10 as proposed at this time.
========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========

Housing Miscellaneous Coments

========== REVIEW ON MAY 26, 2005 BY TOM POHLE ==========
NO COMMENT

County Code 17.10, as well as the Affordable Housing Guidelines, provides additional details for size of lots and units, exterior design and other requirements for Affordable units that will be reviewed as part of the Building Permit application. The developer is encouraged to review these resources, available on the County's web site, to ensure compliance with these requirements prior to submission of building plans. ========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========
========== UPDATED ON AUGUST 11, 2005 BY TOM POHLE ==========

Long Range Planning Completeness Conments

========== REVIEW ON MAY 9, 2005 BY GLENDA L HILL ==========
NO COMMENT

Long Range Planning Miscellaneous Comments

========== REVIEW ON MAY 9, 2005 BY GLENDA L HILL ==========
========== UPDATED ON MAY 9, 2005 BY GLENDA L HILL ==========
NO COMMENT

Dpw Drainage Completeness Comnents

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON MAY 31, 2005 BY DAVID W SIMS ==========
General Plan policies: 7.23.1 New Development 7.23.2 Minimizing Impervious Surfaces 7.23.3 On-Site Stormwater Detention 7.23.4 Downstream Impact Assessments 7.23.5 Control Surface Runoff

An engineered drainage plan was submitted with the application, and was reviewed for completeness of discretionary development, and compliance with stormwater management controls and County policies listed above. The plan was found to need the following additional information and revisions prior to approving discretionary stage Stormwater Management review.

Item 1) The storm drainage calculation summary on sheet TM4 is not sufficient to meet requirements. Please provide a complete detailed analysis of the existing and proposed site hydrology inclusive of sub-area boundaries and assigned runoff coefficients for the different surfaces on the project site. It appears that a large percentage of the structures that cover the existing lot are made from shade mesh stretched over frames, with containerized nursery plants underneath. Such structures are pervious. and the plants would intercept and slow runoff. The use of an aggregate 0.7 runoff coefficient for the existing condition may be too high. Accurate assessment is needed for establishing runoff impacts and future fees. Depending on the results of the detailed calculations other requirements to address policies 7.23.1, 7.23.2 and 7.23.3 may be made in subsequent routings.

Item 2) Indicate on the plans the manner in which building downspouts will be discharged.

Item 3) Please add a note stating all impervious or compacted surfaces to be demolished and returned to landscaping shall be decompacted by ripping or turning the soil prior to placement of additional fill. Grading and fill placed in future landscape areas shall be noted to receive reduced compaction from that used for structural foundation areas. It appears thate rear yard areas of most of the homes comprise a central area of the parcel that can be zoned for minimal compactive disturbance. Please delineate this area as a temporarily protected low construction compaction zone on the plans and note it specifically.

Item 4) Detention will be required only to the extent that pre-development runoff rates cannot be maintained through other applied measures, and where drainage problems are not resolved. See item 1.

Item 5) Offsite assessment is required of each of the two drainage routes from the inlets at the property corners to each outfall location at Rodeo Gulch. Provide each

assessment on fully completed County standard form SD-2, along with all supporting area maps and coefficient estimates clearly delineated. In the last two decades several tracts have made additions to the lower end of this stormdrain system. with all tracts engineered by Ifland Engineers. If partial or complete assessment already exists, it may be used as supporting documentation so long as it is reviewed, fully updated and reflects this project proposal and any other surrounding development changes,

Item 6) Provide a typical section detail of the graded swale used on the lots. A shallow broad bottom swale integrated within the landscaping is recommended to improve filtration and flow delay. Provide swale flowline elevations in plan view.

Item 7) Provide a gutter capacity check for the north gutter on Byer Road in front of lots 1 and 2.

Item 8) Provide finished floor elevation for the homes and garages.

Item 9) Onsite water quality treatment is required for the subdivision. It is not apparent how this is .planned for the site. Maintenance agreements are likely. All driveways appear to discharge oil contaminants to the street, which is not acceptable. Please address.

Item 10) Please provide a note on the plans for permanent bold markings at each corner inlet that read: "NO DUMPING - DRAINS TO BAY"

Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON AUGUST 12, 2005 BY DAVID W SIMS =========
2nd Routing:

Prior Item 1) Complete. The development runoff calculations submitted were acceptable for the discretionary level of review. The post-development impervious areas were roughly estimated and are sufficient for answering mitigation requirements. All impervious areas will need to be more accurately shown and determined by the applicant for fee accounting purposes at the time of filing the final improvement plans.

Prior Item 2) Incomplete. The proposal to pipe all roof runoff directly to the street is not accepted since this was not a pre-existing method of site discharge. Discharging downspouts into the yard landscape would be acceptable without further mitigation. Any proposal to pipe roof runoff will require some form of effective mitigation other than detention prior to discharge offsite. The roof discharge method is to be shown and noted on the civil drainage plans. Please revise.

Prior Item 3) Incomplete. Grading and fill placed in future landscape areas shall be noted to receive reduced compaction from that used for structural foundation areas. Specifically note this as a separate compaction specification on the civil plans. The civil plans need to indicate by what method the low compaction zone will be temporarily protected from construction impacts. To be approved, the method shall prevent, by some type of effective barrier. all construction equipment from traveling over this zone once grading has been completed in these reduced compaction land-

scape areas. Please revise

Prior Item 4) Complete. Calculations from item #1 have demonstrated that detention will not be necessary to mitigate runoff impacts.

Prior Item 5) Incomplete. Historical offsite design calculations for the southern drainage are accepted. Offsite assessment of the northern drainage was not provided and is still required, Provide the northern drainage assessment ON fully completed County standard form SD-2, along with all supporting area maps and coefficient estimates clearly delineated. Evaluate and describe the adequacy of all open ditch sections through which project runoff flows.

Prior Item 6) Complete

Prior Item 7) Complete

Prior Item 8) Complete.

Prior Item 9) Incomplete. Onsite water quality treatment is required for the subdivision. It is not apparent how this is planned for the site. Maintenance agreements are likely. All driveways appear to discharge oil contaminants to the street, which is not acceptable. Please address.

Prior Item 10) Complete, ========== UPDATED ON SEPTEMBER 29, 2005 BY DAVID W SIMS

3rd Routing: Approved

Prior Items 1 & 2) Complete.

Prior Item 3) Complete. Additional requirements deferred to miscellaneousitem A.

Prior Item 4) Complete.

Prior Item 5) Complete, Additional requirements deferred to miscellaneous item B.

Prior Items 6, 7 & 8) Complete.

Prior Item 9) Complete, Onsite water quality treatment is provided by diverting driveway runoff into front yard landscaping for filtration.

Dpw Drainage Miscellaneous Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON MAY 31. 2005 BY DAVID W SIMS ==========
A) Please provide evidence of permits for all structures claimed for impervious area fee offset.

B) This project will require inspection and plan signature by the Director of Public Works. Please provide the necessary cost estimates and signature blocks at the appropriate stage.

Construction activity resulting in a land disturbance of one acre or more. or less than one acre but part of a larger common plan of development or sale must obtain the Construction Activities Storm Water General NPDES Permit from the State Water Resources Control Board. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. For more information see:
http://www.swrcb.ca.gov/stormwtr/constfaq.html

A drainage impact fee will be assessed on the net increase in impervious area. The fees are currently $0.85 per square foot, and are assessed upon permit issuance. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

Because this application is incomplete in addressing County development policies, resulting revisions and additions will necessitate further review comment arid possibly different or additional requirements. The applicant is subject to meeting all future review requirements as they pertain to the applicant's changes to the proposed plans.

All resubmittals shall be made through the Planning Department. Materials left with Public Works may be returned by mail, with resulting delays. ========= UPDATED ON AUGUST 12, 2005 BY DAVID W SIMS =========
NO COMMENT
========= UPDATED ON SEPTEMBER 29, 2005 BY DAVID W SIMS =========
A) Specifically note a separate compaction specification on the civil plans for the landscape grading areas in addition to the grading equipment method described.

B) The engineer's assessment of the northern drainage identifies a ditch section that requires cleanout. This work needs to be shown and noted on the plans prior to completion of the improvement plans.

C) Note the use of Co. standard detail for the under-sidewalk drains.

D) Provide a design depth for the driveway swales, and note adjoining landscape areas to be graded to allow dispersal and spreading of runoff into these soil areas such that filtration actually does occur. Revise distance or direction of runoff for several of the lots so that there is maximized separation of the driveway from the area inlet. Lot 2 is the worst-case example.

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON MAY 9, 2005 BY DEBBIE F LOCATELLI =========
No comment, project involves a subdivision or MLD.

Dpw Driveway/Encroachment Miscellaneous Coments

========= REVIEW ON MAY 9, 2005 BY DEBBIE F LOCATELLI =========
No comment.

Dpw Road Engineering Completeness Comments

========== REVIEW ON MAY 25, 2005 BY GREG J MARTIN ==========
Along Maciel Avenue, the width of the street is recommended to be 36 feet from curb face to curb face. Along Encina Drive, the width of the street is recommended to be 36 feet from the curb face to the edge of the existingswale. We recommend moving the driveways for Lot 1 and Lot 10 to Byer Roadd Encina Drive respectively. At the intersection of Maciel Avenue and Encina Drive and the intersection Willa Way and Encina Drive please show additional existing topography sufficiently to define the intersections

A landscaping, irrigation, and signs and striping plan shall be required.

Full cross sections are required on Maciel Avenue and Encina Drive. Profiles of flowlines on both sides of Maciel Avenue and Encina Drive are required.

The development is subject Live Oak Transportation Improvement (TIA) fees at a rate of $4000 for each new lot created. The number of new lots is 13 new lots minus the existing lot which equals 12 lots. The fee is calculated12 lots multiplied by $4000/lot for a total of $48,000. The total TIA fee of $48,000 is to be split evenly between transportation improvement fees and roadside improvement fees.

If you have any questions please contact Greg Martin at 831-454-2811. ========== UPDATED ON AUGUST 5, 2005 BY GREG J MARTIN ==========
If possible, the driveway for Lot 3 should be shifted so that the driveway minimum of eight feet from the tangent of the curb return for the intersection.

Install a stop sign, stop legend, and stop bar on Encina Drive at its intersection with Willa Way.

The new curb returns should have a radius of 20 feet for the face of curb

The kink in the curb face along Maciel to accommodate the transition from a 40 foot wide road to a 36 foot wide road is not acceptable. Either the return at the corner of Byer Road and Maciel Avenue shall need to be reconstructed or the transition should occur from the return to the driveway for Lot 13. The sidewalk transition should be standard, avoiding a narrow landscaped areas.

Trees shown in the driveways should be identified for removal.

The new curb return at the corner of Willa Way and Encina Drive shall require a saw-cut offset 2 feet from the new lip of gutter. The shaded area denoting new pavement should reflect this.

There should be stationing on the plan view to correspond with the profile information presented for Maciel Avenue and Encina Drive. The existing ground should be shown on each profile, Each profile should include a portion of existing flowlines to show that the profile transitions are smooth.

Actual cross sections should be shown for Maciel Avenue and Encina Drive.

If you have any questions please call Greg Martin at 831-454-2811. ========== UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN ==========

The sidewalk and landscaping from the intersection of Byer Road and Maciel Avenue to the northern lot line for Lot 1 should meet have a standard transition from contiguous sidewalk to separated sidewalk. The standard transition is shown on Figure ST-14 in the County Design Criteria. The contiguous sidewalk should be minimized as much as possible. Actual cross sections are required for Maciel Avenue and Encina Drive due to the extent of roadwork.

per phone call from Greg Martin on 10/3/05 OK to have as a condition project is now complete.

Dpw Road Engineering Miscellaneous Comments

========== REVIEW ON MAY 25. 2005 BY GREG J MARTIN ==========
========== UPDATED ON AUGUST 5, 2005 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN ==========

Environmental Health Completeness Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON MAY 25. 2005 BY JIM G SAFRANEK ==========
NO COMMENT

Environmental Health Miscellaneous Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON MAY 25, 2005 BY JIM G SAFRANEK ========== Hazmat has approved the Soil Sampling Report by Weberthat addresses the pesticide issue.Contact R.Charles of EHSfor consultation at 454-2756.

COUNTY OF SANTA CRUZ

INTER-OFFICE CORRESPONDENCE

DATE: September 22, 2005

TO: Cathleen Carr, Planning Department

FROM: Carl Rom, Department of Public Works, Survey/Development Revie

SUBJECT: APPLICATION 05-0269, APN 029-371-18, TRACT NO. 1506, CAPITOLA GARDENS **NO.** 2, THIRD SUBMITTAL

This submittal addresses all my comments from the earlier submittals. I have no further comments on this application.

If you have any questions or need any clarification of the information in this memo, please call me at extension 2806.

CDR:cdr

EXHIBIT H

Live Oak School District

Excellence is achieved through a caring partnership.

May 10,2005

Donna Strohbeen
213 Jackson Street
Santa Cruz, CA 95060

RE: APN 029-371-18
Application No. 05-0269

To Whom It May Concern:

Under its authority, and consistent with the County's General Plan, the District has established a Mello-Roos Facilities District. The Mello-Roos is to meet the supplemental mitigation cost not covered by the District's current developer fees. The mitigation costs are' set forth in the District's adopted Facilities Master Plan: Developmental Impact Mitigation Plan.

The District seeks mitigation as a condition of approval of the impact of your project of development [creating two (2) or more lots] within its boundaries. This condition is based on the full mitigation impacts of these developments upon the District's facilities. You are required to enroll your property in the District's Mello-Roos to help meet the impact of mitigation on the school district. The supplemental mitigation necessary after the developer fee assessment is $11,636 for single family homes and $5,818 for multi-family homes. These amounts could either be paid as a one-time assessment or paid over time as a parcel fee through the District's Mello-Roos **CFD,** in which case the fee will be assessed through the annual property taxes paid on the property. We will be offering Mello-Roos options to finance the cost should you choose *to* do so.

Please contact me at 475-6333 ext. 215 if you have any questions or would like to discuss finance options.

Your cooperation and assistance in this matter is greatly appreciated.

Sincerely,

Steve Romines
Assistant Superintendent, Business Services

C: Cathleen Carr, County Project Planner

DISTRICT OFFICE 984-1 BOSTWICK LANE SANTA CRUZ. CA 95062-1798 (831) **435-6333** **Fax** (831) 475-2638
Del Mar School 1959 Merrill Street 477-2063
Live **Oak** School 1916 **Capitola** Road **475-2000**
Ocean Alternative School 984-6 Bostwick Lane 415-0767
Green **Acres** School 966 Bostwick Lane 475-0111
Shoreline **Middle** School 855 17th ***Avenue*** 475-6565
Cypress Charter High School 2039 Merrill Street 477-0302
www.lodo.santacruz.k12.ca.us

EXHIBIT H

CENTRAL
FIRE PROTECTION DISTRICT
of Santa Cruz County
Fire Prevention Division

930 17th Avenue, Santa Cruz, CA 95062
phone (831)479-6843 fax (831)479-6847

Date:	May 10,2005
To:	Donna Strohbeen
Applicant:	**Hulter Construction**
From:	Tom Wiley
Subject:	**05-0269**
Address	**Maciel Ave**
APN:	024371-18
OCC.	**2937**118
Permit:	20050139

We have reviewed plans for the above subject project

Based upon a review of the plans submitted, District requirements appear to have been met, and PLANS ARE APPROVED FOR MINOR LAND DIVISION.

Please ensure designer/architect reflects equivalent notes and requirements on velums as appropriate when submitting for Application **for** Building Permit.

When plans are submitted for multiple lots in a tract, and several standard Floor Plans are depicted, include Fire District Notes on the small scale Site Plan. *For* each lot, *submit only* sheets with the following information; **Site** Plan *(small* scale, highlight lot, ***with*** District notes), Floor Plan, Elevation (roof covering and spark arrestor notes), *Electrical* Plan (if smoke detectors are shown on the Architectural *Floor* Plan this sheet *is* not required). Again, we must receive, VIA the COUNTY, SEPARATE submittals (appropriate site plans and sheets) FOR EACH APN!!

NOTE on the plans that these plans are in compliance with California Building and Fire Codes (2001) and District Amendment.

NOTE on the plans the OCCUPANCY CLASSIFICATION, BUILDING CONSTRUCTION TYPE-FIRE RATING and SPRINKLERED as determined by the building official and outlined in Chapters 3 through 6 of the 2001 California Building Code (e.g., R-3, Type V-N, Sprinklered).

The FIRE FLOW requirement for the subject property is 1000 gallons per minute for 120 minutes. NOTE on the plans the REQUIRED and AVAILABLE FIRE FLOW. The AVAILABLE FIRE FLOW information can **be** obtained from the water company.

SHOW on the plans a public fire hydrant, meeting the minimum required fire flow for the building, within 250 feet of any portion of the building, An additional fire hydrant is required to be installed between lots 8 & 9 at the curb.

NOTE on the plans that the building shall be protected by an approved automatic sprinkler system compiying with the edition of NFPA 13D currently adopted in Chapter 35 of the California Building Code.

NOTE that the designer/installer shall submit three (3) sets of plans and calculations for the underground and overhead Residential Automatic Sprinkler System to this agency for approval. Installation shall follow our guide sheet.

Show on the plans where smoke detectors are to be installed according to the following locations and approved by this agency as a minimum requirement:

- One detector adjacent to each sleeping area (hall, foyer, balcony, or etc).
- One detector in each sleeping room.
- One at the top of each stairway of 24" rise or greater and in an accessible location by a ladder.
- There must be at least one smoke detector on each floor level regardless of area usage.
- There must be a minimum of one smoke detector in every basement area.

NOTE on the plans where address numbers will be posted and maintained. Note on plans that address numbers shall be a minimum of *FOUR* (4) inches in height and of a color contrasting to their background.

NOTE on the plans the installation of an approved spark arrestor on the top of the chimney. Wire mesh not to exceed ½ inch.

NOTE on the plans that the roof coverings to be no less than Class "B" rated roof.

NOTE on the plans that a 30-foot clearance will be maintained with non-combustible vegetation around all structures.

Submit a check in the amount of $100.00 for this particular pian check, made payable to Central Fire Protection District. A $35.00 **Late Fee** may be added to your plan check fees if payment is not received within 30 days of the date of this Discretionary Letter. INVOICE MAILED TO APPLICANT. Please contact the Fire Prevention Secretary at (831) 479-6843 for total fees due for your project.

If you should have any questions regarding the pian check comments, please call me at (831) 722-2393, or email me at tOmW@Ci?ntralfDd.Com. All other questions may be directed to Fire Prevention at (831)479-6843.

CC: File & County

As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. Further, the submitter, designer, and installer agrees to hold harmless from any and all alleged claims to have arisen from any compliance deficiencies, without prejudice, the reviewer and the Central FPD of Santa Cruz County.

Any order of the Fire Chief shall be appealable to the Fire Code Board of Appeals as established by any party beneficially interested, except for order affecting acts or conditions which, in the opinion of the Fire Chief, pose an immediate threat to life, property, or the environment as a result of panic, fire, explosion or release.

Any beneficially interested party has the right to appeal the order served by the Fire Chief by filing a written "NOTICE OF APPEAL" with the office of the Fire Chief within ten days after service of such written order. The notice shall state the order appealed from, the identity and mailing address of the appellant, and the specific grounds upon which the appeal is taken.
2937118-051005

EXHIBIT H

COUNTY OF SANTA CRUZ

Inter-Office Correspondence

DATE: August 10, **2005**

TO: Tom Burns, Planning Director
Cathleen Carr, Planner
Brian Turpen, Public Works

FROM: Supervisor Jan Beautz

RE: ADDITIONAL COMMENTS ON APP. **05-0269**, APN **029-371-18**, MACIEL AVENUE, SUBDIVISION

Please consider the following areas of concern in your evaluation of the above subdivision application to create **13** residential lots and construct single family homes on those lots.

Sheet TM3, Preliminary Site Improvement Plan, includes a thick black lined square near the corner of Encina and Maciel which may indicate a catch basin. However, this symbol has not been identified, nor have cross-sections been provided. Is a silt and grease trap included with this potential feature to filter storm waters prior to runoff leaving the development?

The applicant has now widened the proposed improved Encina Drive to provide a travel width similar to the existing streets surrounding this development. However, the proposed cross-section for this roadway shown on **TM3** is of concern. This cross-section indicates the additional roadway width will be at a higher elevation than the existing road grade. The new curb and gutter should collect and carry runoff for the roadway and adjacent parcels. However, this curb and gutter is over one foot higher than the existing drainage swale on the north side of the roadway. The cross-section indicates a slight crown in the new section of roadway to direct roughly one third or less of the storm flow into the new curb and gutter system. However, this crown is only minimally higher than the gutter on the southern side of the improved roadway. I am concerned that this proposed grade will result in significant volumes of storm waters flowing across the roadway into the existing unimproved swale on the northern side. It is my understanding that the existing swale shown on the plans may only exist intermittently along the northern side of the road. Should curb and gutter

EXHIBIT H

improvements also be installed on the northern side of Encina to prevent the existing homeowners' properties from being flooded during significant storm events?

There is an existing low area of significant size in the central portion of the parcel. This area serves to detain and percolate storm waters. The applicant is proposing to import almost 4,000 cubic feet of soils into this area so that storm waters will now flow towards the surrounding streets. Sheet L-1 of the landscape plan indicates that planted drainage swales will be installed along all side yard property lines for the proposed lots to so direct waters onto the surrounding streets. The plant legend indicates that these three foot wide areas will be planted with creeping red fescue or juncus. However, these swales are stated to be only 4 inches deep. Roots of adjacent trees could impact these swales. Gophers and moles moving within this planted area could easily remove this minimal depression, as could homeowners once they landscape their rear yards. The standard for new development has been underground piping. Has this been considered here?

The applicant has submitted revised exteriors for the proposed dwellings which architecturally enhance all four sides of the proposed structures. Will the applicant be conditioned to install the upgraded window, door and wall features currently indicated on the exterior elevations for all proposed structures? Proposed plans 2A, 2AR, 2B. 2BR, and 2C all contain a clear story element adjacent to the entryway. Proposed plans 3A, 3C, 3AS, 4A, and 4AR all contain large clear story elements above their living rooms. These areas may have been overlooked in Floor Area Ratio calculations. Code Section 13.10.323(c) requires that all areas with ceiling heights greater than 16 feet be counted twice. Will F.A.R. calculations be verified and adjusted accordingly to comply with Code requirements? Will this result in any of the parcels exceeding the maximum allowable 50% F.A.R.?

The landscape plans have been revised to include a number of 24 inch box street trees. However, these trees continue to be small species types of trees. As this subdivision will have all utilities undergrounded, could species capable of achieving greater heights and canopy widths be selected as street trees? The applicant has added an additional 11 California Live Oak trees to be planted in the front yards of most lots. Over time these trees can achieve greater heights and can significantly enhance a neighborhood. However, these trees are located directly adjacent to the proposed drainage swales for the lots as well as lawns or additional landscaping that may require ongoing irrigation.

EXHIBIT H

It is my understanding that native oaks thrive best when watering is reduced or eliminated after the first three to five years; otherwise the trees can become susceptible to various diseases. Will the ongoing moisture levels inherent in these locations compromise the long term health of these trees?

JKB:ted

3280141

EXHIBIT H

COUNTY OF SANTA CRUZ
INTER-OFFICE CORRESPONDENCE

DATE: August 24,2005
TO: Cathleen Carr, Planning Department, Project Planner
FROM: Melissa Allen, Planning Liaison to the Redevelopment Agency
SUBJECT: Application 05-0269, 2nd **Routing,** APN 029-371-18, Maciel Ave between Byer Rd & Encina Dr, Capitola Gardens No. 2, Live *Oak* Planning Area

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The applicant is proposing to create 13 residential lots include two affordable housing units and to grade approximately 7,000 cubic yards. The project requires a Subdivision Permit and Preliminary Grading Approval. The property is located on the west side of Maciel Avenue between Byer Road and Encina Drive in Live *Oak.*

This application was considered at an Engineering Review Group meeting on May 18,2005. The Redevelopment Agency (RDA) previously commented on this application on May 27,2005. RDA appreciates the applicant addressing most of the previous comments. RDA has the following comments on this routing of the proposed project.

1. Street Sections. Street Trees and Landscauing
   a. The new cross sections for Maciel Avenue and Encina Drive should be more detailed and better defined.
   b. If the driveway to Lot 3 is shifted as suggested by DPW Road Engineering 8/5/05 comments then the replacement or existing arbutus should be moved or replaced accordingly.
   c. All of the landscape strip planting and street trees must be irrigated and maintained in perpetuity by the owner of the adjacent lot and the project should be conditioned accordingly.
   d. The project conditions should require that the developer provide a copy of the CC&Rs or other recorded documentation to the Planning Department prior to final occupancy that identifies the responsible party for the permanent landscape maintenance. (Note: The subdivisions to the south and southwest of this site, Capitola Gardens & Alexandria Gardens, have neglected their maintenance responsibility for the Capitola Road landscape strip behind the sidewalk.)
   e. If the removal of the existing nursery sign impacts any existing landscaping, it should be replaced in kind.

2. Architecture
   Note: The 3-D rendering does not appear to represent what the site plan shows for the Lot 3 comer.

The items and issues referenced above should be evaluated as part of this application and/or addressed by conditions of approval. RDA would like to see future routings of this project if changes are proposed pertinent to these comments. The Redevelopment Agency appreciates this opportunity to comment. Thank you.

cc: Greg Martin, DPW Road Engineering
Betsey Lynberg, RDA Administrator
Paul Rodrigues, RDA Urban Designer
Ronald Lecher, RDA Project Manager

EXHIBIT H

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

February 21, 2006 (rev.)

County of Santa Cruz Planning Department
Tom Burns, Ken Hart, Paia Levine and
Cathleen Carr
701 Ocean Street, 4th Floor
Santa Cruz. California 95060

County of Santa Cruz Health Services Agency
Environmental Health
Rolando Charles, Steve Schneider
701 Ocean Street, Room 312
Santa Cruz, California 95060

Subject: RESPONSE **TO COMMENTS**
-California Regional Water Quality Control Board letter dated January 24, 2006

Site Location: Hulter Begonia Garden Land Division
2545 Capitoia Road, Santa Cruz (APN# 029-371-18)

1.0 Executive Summary: This letter presents a response to comments issued by California Regional Water Quality Control Board (CRWQCB) staff as part of !heir California Environmental Quality Act (CEQA) analysis of the proposed site development. The CRWQCB letter presents a list of issues brought up by Water Board staff regarding the proposed development's potential for increased risk to groundwater or surface waters[1].

Given the fact that a regulatory-approved remedial grading project will be completed as an integral part of the proposed development, it **is** our opinion that the conversion **of** the subject property from its existing commercial land use (nursery) to the proposed residential housing development will improve environmental conditions at the site and vicinity. Mitigations are specifically designed *to:*

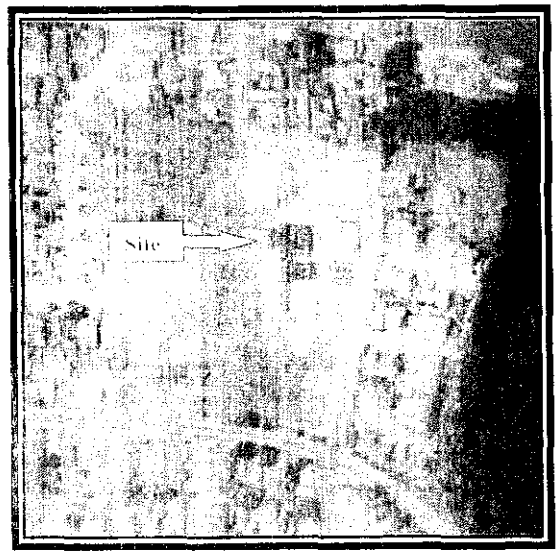
- improve the water quality of stormwater discharge to Rodeo Gulch Creek;
- ensure that soils at the site are safe for residential land use and the tested soil quality meets all health-based threshold concentrations for chemicals of concern,
- provide for the safe transport and appropriate landfill disposal of all negatively-impacted surface soils, and.
- reduce potentiai impacts to groundwater.

The regulatory-approved site mitigation, coupled with the best management practices that will he implemented **for** the grading and construction phase **of** the project (air monitoring, erosion control), will physically improve the site and reduce any potential impacts to shallow groundwater **or** surface waters.

2.0 Background: The proposed development includes conversion of a 2.43 acre commercial nursery property into 13 residential parcels. This transition to residential development follows recent residential development of 17 adjoining lots from the came nursery lands in 1999.

The subject sits is surrourded on all sides by residential housing developments and has street frontage access on all four sides. Up until recently, the site contained a number of greenhouse structures and retail sales area associated with the Antonelli Brothers Begonia Gardens, an operating nursery which operated at the subject site and adjoining lands for decades.

[1]: CRWQCB letter: APN 029-371-18, *Hulter Begonia* Garden Land Division: Pesticide Contamination,



No groundwater was encountered in geotechnical exploratory borings drilled on site in March 1995 (5 borings to 10 to 40 feet)'. Depth to groundwater was measured to be at an elevation of 40 feet below ground surface in an on-site water production well constructed to a depth of 205 feet with a cement seal from ground surface to 55 feet. Shallow soils beneath the site appeared relatively continuous and typical *of* terrace deposits (shallow clayey silt underlain by sandy silt to silty sand). The nearest surface water drainage is the southward-flowing Rodeo Gulch Creek. located approximately 450 feet east of the site

**Previous Environmental Assessment Work (1999): Adjoining lands that were previously part of the Antonelli Begonia Gardens parcel were tested in 1992 as part of a Phase II Environmental Site Assessment -- this testing included soil screening for residential development. The results indicated that surface soil (0-6 inches) contained elevated Concentrations of DDT and its metabolites DDD and DDE[3]. No Dieldrin was detected in any of the samples (detection limit at 0.016 mg/kg). A regulatory-approved grading and soils relocation plan was developed to scrape off the surface soils containing elevated DDT concentrations and relocate them to a 6-foot deep pit encapsulated with asphalt (soils were used as parking lot subgrade)[4]. County *of* Santa Cruz Health Services closure of this work was granted in September 1999[5].

**Recent Assessment Work (2005): A shallow soil investigation was completed in accordance *with* a regulatory-approved workplan[6] to determine whether long term commercial nursery operations at the subject site had impacted the surface soils with the pesticide chemicals *of* concern. The 2005 investigation followed the characterization sampling described above, which was again

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[2]: Don Tharp & Associates report: *Geotechnical Investigation Design Phase. Proposed Subdivision* at *2545 Capitola Road.* dated April 18, 2005.

[3]: Sampson Engineering Associates report: *Environmental Site Assessment for Antonelli Brothers* Begonia Gardens. dated November 24. 1992. Note: copy of tabulated results and sample location map included in Appendix A.

[4]: :John Minney Consulting Engineer report: *Revised Grading Plan Capitola* Gardens *Subdivision,* dated March 16. 1999, and *Final Subgrade/Stockpile Testing for Capitola Gardens Subdivision,* dated July 29, 1999

[5]: County of Santa Cruz Health Services Agency letter: *Capitola Gardens DDT Remediation* Project, dated September 22. 1999.

[6]: Weber, Hayes and Associates workplan: *Workplan* to Confirm *Shallow Soil Conditions Prior to a Property Sale, 2525 Capitola Road, Santa Cruz,* dated Jan-5, 200.
Count, *of* Santa Cruz *Health* Services Agency, *Workplan Approval.* dated Jan-21. 2004.

completed on adjoining nursery lands (1999. see above)

Soil samples were collected on a grid containing twenty-five sample locations (50-foot centers) and analyzed for persistent pesticides to see if concentrations were present above established risk-based concentrations (Preliminary Remediation Goals. PRG's). The PRG's have been established by the California Department of Toxic Substances Control (DTSC) to use as initial screening levels as they are considered to be protective for humans (including sensitive groups), over a lifetime'. Laboratory results showed that nine of the twenty-five surface samples contained DDT or Dieldrin at concentrations exceeding PRGs for residential sites.

- Limited Remedial Excavation (Grading) and Disposal Plan: We have obtained disposal acceptance from a local Class III landfill for these relatively low-level concentrsticns and have proposed to transport these soils to this Class III landfill for appropriate disposal (see acceptance email, attached). We have estimated that a total of approximately 1,290 cubic yards (yd^3) of soil will need to **be** removed in order to obtain residential PRG concentrations for the shallow soils. The average concentrations of the 1.290 yd^3 of soil hauled is calculated to be 0.80 for DDT and 0.10 for Dieldrin. In addition, 1815 yd^3 of previously buried soils containing an average concentration of < 1 ppm will also be removed.

***3.0* Response to Comments**: The following section presents responses to list cf specific regulatory comments issued by CRWQCB staff as part of the CEQA process (the *full* text of *the* CRWQCB staff is presented for clarity).

Comment #1: Site soil cleanup levels established for DDX and dieldrin do not appear adequately water protective. Pursuant to initial Study requirements. soils with contaminant concentrations up to almost 10,000 000 times water standards (i.e., 1000 ppb DDT cleanup level in soils compared to 0.00059 ppb DDT standard in water) may remain onsite with no contaminant or restriction. Such soils will cause exceedence of water quality standards *in* Rodeo Gulch if. for example, during heavy rains, contaminated soils exposed at the Site surface erode and migrate as entrained sediment the short distance from the Site to the Gulch and comprise more than one ten millionth of the water column there. That appears to be a likely scenario.

Site soil cleanup levels should be reduced to a concentration that ensures soils remaining onsite will not cause water quality standard exceedances. It may be necessary to impose a Site soil cleanup level of non detect for DDX, bearing in *mind analytical detection limits for* DDX in soil are on the order of single to tens of ppb, roughly 10,000 to 100,000 times the water quality standard. Alternatively, DDX-containing soils may be disposed onsite with binding conditions imposed, such as proper capping and containment, runon/runoff controls, maintenance, monitoring, deed notice and restriction, etc.

Response: Storm drainage calculations indicate the conversion to residential housing will result in a decrease in storm runoff *due to* a reduction of impervious surfaces and the landscape design incorporates the installation of graded swales for improved onsite

7: Region 9 EPA guidance document: *Preliminary Remediation Goals (PRGs)*.2002. http://www.epa.gov/Region9/waste/sfund/prg/index.htm).

infiltration of storm runoff. As such, the site development reduces any potential runoff of the trace levels of persistent pesticides that will remain following remedial excavation operations.

DDT, its metabolites, and dieldrin been banned since 1972 because of their persistence in the environment which occurs because they bind tightly to soil, break down very slowly in both soil and water, and do not volatilize readily. They are essentially immobile in soil, becoming strongly absorbed onto the surface layer of soils. These persistent pesticides are usually concentrated in the top few inches because of their low solubility and tendency to strongly attach to soil particles including organic matter. Recent residential development constructed on adjoining nursery land did not have removal requirements based on the potential of these immobile, pesticide compounds.. Current laboratory detection limits for organochlorine pesticides in water are 0.4 ppb which is four orders of magnitude higher than the threshold established in the California Toxics Rule (= the human health advisory for consumption of Rodeo Gulch water or organisms).

Comment #2: Site Soil cleanup levels established for DDX and dieldrin, yet the initial Study, seems to indicate the presence of additional contaminants in Site soils, possibly also requiring cleanup levels. Table 1 (Initial Study Attachments 8, pages 29 though 32) reports lindane, chlordane and endosulfan also present in Site soils, not surprising in a long established commercial nursery. Possibly this issue has been resolved without a description in the Initial Study.

Response: The comrient, which refers to Table 1 (Initial Study Attachments 8, pages 29 though 32) is referring to laboratory analysis completed on adjoining parcels that were developed into residential housinp in 1999. However, trace levels of these three compounds were detected in on-site soils, but all at concentrations well below established PRG screening level thresholds - see Table 1 of the April 4, 2005 *Soil* Sampling Report (Weber, Hayes arid Associates). As noted in the report, only two specific compounds of concern (DDT and Dieldrin) were detected at concentrations that exceeded residential PRGs/target cleanup levels

Comment #3: The Initial Study does not address other possible Site soil contaminants that could alter pesticide fate and transport. For example, petroleum hydrocarbons, such as some pesticide carriers or unrelated solvents can increase pesticide solubility and migration potential. It would not be unusual for hydrocarbons to have been released to soil at this long establish commercial nursery. Possibly this issue has been resolved without a description in the Initial Study.

Response: The sampling plan was completed as an extension of previous work which included multiple assessment reports (see bibliography of completed reports included in the Initial Study (Attachment, page 26) Earlier assessment reports included a Preliminary *Environmental* Assessment *Report* (Carson Consultants, 11/13/89), a Supplemental *Environmental* Assessment (Carson Consultants, 8/16/91), and an Environmental Site *Assessment* (Sampson Engineering Associates, 11124192)

Comment #4: Marina Landfill is not permitted to accept hazardous waste, as apparently contemplated by the Initial Study. The Initial Study states soil excavated from the Site (above the

cleanup levels of 1,000 ppb DDX or 30 ppb dieldrin) will be disposed at Marina Landfill. California Code of Regulations (CCR) 22 Hazardous Waste regulations mandate that soil with greater than 1,000 ppb DDX is Hazardous Waste, which Marina Landfill is not permitted to accept. Subsequent discussions indicate soils destined for Marina have an average DDX concentration less than 1,000 ppb, which may or may not resolve this issue, depending on specifics. In general, dilution of a hazardous waste soil with cleaner soil to qualify the entire volume as nonhazardous is unacceptable.

Response: Landfill acceptance criteria for soils containing land use chemicals commonly uses a compilation *of* in-situ samples in lieu of composite averaging. There was no attempt to disguise the results *or* dilute the mass. Marina Landfill materials acceptance engineer; approved acceptance of this low level soils after they reviewed the full set of laboratory data, summary table, and site description (see Appendix B. *Soil* Sampling *Report*, Weber, Hayes and Associates, dated April 4, 2005).

Comments #5, 6: The Initial Study does not address ecological risk, threat to nonhuman receptors, of soil contaminants allowed to remain onsite with no contaminant. This analysis may be beyond the scope of the project, though it is an environmentally valid concern. The Initial Study does not address threat to groundwater of soil contaminants allowed to remain onsite.

Response: Exploratory borings *indicate first encountered groundwater* is *at* depths equal to or greater than 40 feet below ground surface. The residual concentrations of the persistent pesticides that are essentially immobile in soil do not appear to be a threat to groundwater. Given the data provided above, we believe an ecological risk assessment is beyond the scope of this project.

4.0 Conclusions

As noted, this letter report presents a response to a CEQA generated list of issues presented by CRWQCB staff regarding the proposed development's potential for increased risk to groundwater or surface waters. **It is our opinion that** the **conversion of the subject property from its existing commercial** land use **(nursery'** to the **proposed residential housing development will improve environmental conditions at the site and vicinity.** Specifically:

- A regulatory-approved remedial grading project is designed to reduce existing trace levels of residual pesticide concentrations to health based levels which will dramatically reduce any potential impacts to shallow groundwater or surface waters.
- The land use transition from a long-term commercial nursery to a residential development will reduce stormwater runoff as well the use of pesticides, herbicides, and fertilizers thereby dramatically reducing any potential impacts to shallow Groundwater or surface waters.
- Mitigations are specifically designed to:
  - improve the mater quality of stormwater discharge to Rodeo Gulch Creek:
  - **ensure** that soils at the site are safe Icr residential land use and the tested soil quality meets all health-based threshold concentrations for chemicals of concerri:
  - provide for the safe transport and appropriate landfill disposal of all negatively-impacted surface soils and
  - reduce potential impacts to groundwater.

In summary, we believe the regulatory-approved site mitigation, coupled with the best management practices that will be implemented for the grading and construction phase of the project (air monitoring, erosion control), will physically improve the site and reduce any potential impacts *to* shallow groundwater or surface waters.

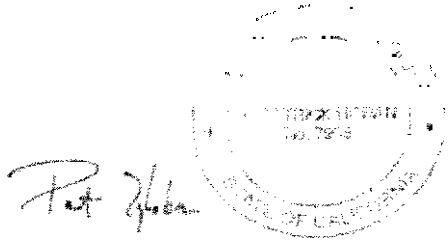
5.0 Limitations

Our service consists of professional opinions and recommendations made in accordance with generally accepted geciogic principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead io modifications of the options expressed herein.

If you have any questions or comments regarding this workplan, please contact *us* at our office(722-3580:

Respectfully submitted

WEBER. HAYES AND ASSOCIATES
A California Corporation



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