



California Regional Water Quality Control Board

Santa Ana Region



Linda S. Adams
Acting Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

July 11, 2011

Mr. Thomas Heggi
(THeggi@ivinecompany.com)
Irvine Community Development Company
550 Newport Center Drive
Newport Beach, California 92660

CONDITIONAL DETERMINATION OF NO FURTHER ACTION FOR SOIL AND GROUNDWATER AT THE FORMER GENERAL ELECTRIC ENERGY AND ENVIRONMENTAL RESEARCH (GE/EER) FACILITY), 8001 IRVINE BOULEVARD, IRVINE, CALIFORNIA (GeoTracker # SL208584045; PCA # 2085800)

Dear Mr. Heggi:

Regional Board staff (Board staff) has reviewed the "Final Site Closure Report", which was submitted by Advanced Environmental Concepts, Inc. (AEC) on September 10, 2009, for the former GE/EER facility at the above referenced address (the site). AEC, on behalf of the Irvine Community Development Company (ICDC), has requested a no further action (NFA) determination for the site.

There are two planned development sites, where six areas of concern (AOCs) were originally identified within the 25-acre site (Enclosure 1).

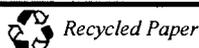
1. The "Park site" consists of 4.75 acres, with three AOCs described as the "Knoll", "Main Excavation", and the "Northern Excavation".
2. The "Residential-use site" consists of three AOCs, encompassing an area of 20.25 acres, and described as the "Bone Yard", "Southwest Area", and the "Area Along "N" Street".

Site History

The site consists of 25 acres of land in the City of Irvine. Historically, the area west of the site was used primarily for agriculture and related operations, and the property to the east was used for military housing associated with the El Toro Marine Corps Air Station (MCAS) until the base was decommissioned. The area surrounding the site is planned for residential and parkland development by ICDC, as is the adjacent portion of the former MCAS. Development of a residential neighborhood and park at the site was approved by the City of Irvine, and is described as Vesting Tentative Tract #16562, dated September 19, 2004. Although the site is currently vacant, it has been extensively graded, largely in association with the remedial work that has been conducted.

Beginning in the 1800s, the site was a part of the original Irvine Ranch (which later became The Irvine Companies, and includes ICDC). During the 1940s and 1950s, some areas of the site were used as a quarry. From 1960 to 1966 the Ford Motor Company/Philco Corporation (Aeroneutronic Division) operated a rocket engine, small missile, shaped charge, flare, and separation device testing area on the 25-acre site. According to AEC, there are no available records to indicate the land use at the site between 1966 and 1975. Commencing in 1975, Ultrasystems, Inc. occupied the site. Ultrasystems tested various burner configurations for high

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efficiency, low emission commercial boilers. Their operations involved the use of pulverized coal, low Btu gas and fuel oil. Energy and Environmental Research Corporation (EER) was spun off from Ultrasonics as a separate company during the 1980s. EER operated as a test facility, occupying approximately 6 acres of the site. While most of the site remained undeveloped, some equipment and materials were stored in various areas of the 25 acre property. General Electric bought the EER testing division in 1999, and continued its operations at the site until April 2004.

GE/EER's lease with ICDC terminated on June 30, 2004, and GE/EER vacated the property to accommodate ICDC's planned future residential development. At the time the lease was terminated, the GE/EER site facilities included a main office trailer, a two-story office and document storage building, a machine shop, combustion test areas, analytical laboratory, several storage sheds, and outdoor storage areas. All of the buildings and facilities were removed in 2004.

Site Investigation

Following GE's acquisition of EER in 1999, a Baseline Environmental Assessment and two rounds of groundwater monitoring were conducted at the site. The Baseline Environmental Assessment was required by Lease Amendment No.7 between EER and the ICDC, which was executed as a condition of GE's acquisition of EER.

Soil borings were drilled at onsite locations of potential concern, including in the vicinity of septic systems, storage areas, a machine shop, a laboratory, storage sheds, a former underground storage (UST) area, a large-scale test facilities bay area, a former auto shredder waste storage area, and a former equipment storage, or "bone yard" area. In addition, shallow soil samples were collected from outlying areas of the site. Selected soil samples were analyzed for volatile organic compounds (VOCs), semi-VOCs (SVOCs), total recoverable petroleum hydrocarbons (TRPH), total fuel hydrocarbons (TFH), polychlorinated biphenyls (PCBs), metals, and pH.

Soil sample analyses indicated 1,1-dichloroethylene (1,1-DCE) and trichloroethylene (TCE) to be the primary VOCs at concentrations ranging from 17 micrograms per kilogram ($\mu\text{g}/\text{kg}$) of 1,1-DCE to 51 $\mu\text{g}/\text{kg}$ of TCE. Other chemicals found at the site, in the area of the UST, included minor concentrations of acetone (67 $\mu\text{g}/\text{kg}$), chloroform (6.3 $\mu\text{g}/\text{kg}$) and toluene (6.0 $\mu\text{g}/\text{kg}$).

Groundwater monitoring in 1999 and 2000 indicated that low concentrations of VOCs were present in four of the site's six wells. A soil gas survey was performed in 2002 to identify the potential surface sources that may have contributed to groundwater contamination. The soil gas survey results indicated that DCE, TCE and carbon tetrachloride were detected at maximum concentrations of 203 micrograms per liter ($\mu\text{g}/\text{l}$), 195.5 $\mu\text{g}/\text{l}$ and 185 $\mu\text{g}/\text{l}$, respectively. Concentrations of 1,1-dichloroethane (DCA), 1,2-DCA, 1,1,1-trichloroethane (TCA), 1,2-DCE and chloroform ranged from 1 $\mu\text{g}/\text{l}$ to a maximum of 46 $\mu\text{g}/\text{l}$.

Additional sampling of soil and groundwater was conducted at the site during 2003 and 2004. The analytical results indicated that TCE was present in the soil at concentrations ranging from 42 to 910 $\mu\text{g}/\text{kg}$; DCE ranged from 32 to 730 $\mu\text{g}/\text{kg}$; DCA ranged from non-detect (ND) to 34 $\mu\text{g}/\text{kg}$; 1,2-DCA ranged from ND to 6.6 $\mu\text{g}/\text{kg}$; cis-1,2-DCE ranged from ND to 52 $\mu\text{g}/\text{kg}$; and TCA ranged from ND to 23 $\mu\text{g}/\text{kg}$. Trans-1,2-DCE, 1,1,2-TCA and chloroform ranged from ND to <5 $\mu\text{g}/\text{kg}$. Acetone and methylene chloride were detected, but both were considered to be laboratory contaminants.



Groundwater analytical results indicated that TCE concentrations ranged from 440 to 1,300 µg/l; DCE concentrations ranged from 440 to 1,200 µg/l and DCA concentrations ranged from <5 to 14 µg/l. Carbon tetrachloride ranged from <5 to 86 µg/l. All other existing wells at the site during 2004 contained VOCs at concentrations of <5 µg/l.

URS used the analytical data to assess overall groundwater quality, compare the groundwater parameters from within and outside the impacted plume, and to evaluate the extent to which natural attenuation of VOCs was occurring at the site. Based on this analysis, URS recommended a remedial course of monitored natural attenuation. In our letter of November 6, 2003, Board staff concurred with the recommendation for continued monitoring, but also provided comments regarding some inaccuracies in the URS report, and recommended that GE initiate a more expedient remediation technique to address the VOCs in groundwater, instead of simply relying upon natural attenuation.

In May 2004, Board staff was informed that the ICDC would terminate their lease agreement with GE/EER on June 30, 2004. In July 2004, URS conducted the removal and offsite disposal of 4,463 tons of petroleum and metals-impacted soil, under the oversight of staff from the Orange County Health Care Agency (OCHCA). The OCHCA issued a no further action designation, pertaining only to the on-site soil, on November 19, 2004. ICDC assumed the responsibility for remediation of the VOC-impacted soil and groundwater at the site in December, 2004.

Human Health Risk Assessment

In 2006, ENVIRON International Corporation (ENVIRON), on behalf of ICDC, prepared a report entitled "Development of Risk-Based Target Concentrations (RBTC) in Groundwater for Potential Migration of Volatile Organic Compounds to Ambient and Indoor Air". The report concluded that the following RBTCs for groundwater were appropriate at the site:

	1,1-DCA	1,1-DCE	cis-1,2-DCE	CCl ₄	TCE	Vinyl Chloride
Minimum Residential RBTC (µg/l)	1.38E+02	6.32E+02	2.48E+03	9.46E-01	5.89E+01	3.90E-01
Minimum Park Use RBTC (µg/l)	2.63E+05	9.49E+05	3.75E+06	1.81E+03	1.12E+05	7.43E+02

In August 2006, ICDC submitted the report to Board staff. Board staff subsequently requested the review of ICDC's report, including the recommended RBTCs, by staff from the California Office of Environmental Health Hazard Assessment (OEHHA). Based upon their review, OEHHA staff concluded that the RBTCs "were calculated correctly for future residents and are reasonably protective for park visitors."

Site Remediation

The site was subdivided into the following areas of concern (AOC): the Main Excavation, Northern Excavation, Southwest Area, Bone Yard, the Knoll and Area along N Street (Enclosure 1). The Park site includes three AOCs: Main Excavation; Northern Excavation; and Knoll. (The land use restrictions for the Park Site are described in Enclosure 2.) The remaining AOCs are a

part of the Residential-use site, which borders the Park Site. (The land use restrictions for the Residential-use site are described in Enclosure 3.)

AEC proposed soil excavation and removal, in order to remove overburden and obtain access for initiating an *in situ* groundwater remedy. After excavation activities were completed in the Main Excavation in 2005, a lactic acid solution that facilitates bioremediation, (Regenesi[®] Hydrogen Release Compound - HRCx[®]), was injected, in response to Board staff's recommendation for proceeding with a proactive remediation approach at the site. HRCx[®] was also injected in the Knoll area to augment bioremediation.

When analytical results indicated that HRCx[®] was not effective in attenuating the VOC concentrations, ENVIRON, on behalf of ICDC, proposed a change in remediation methodology. ENVIRON's proposed alternative consisted of injecting a mixture of sodium persulfate (Klozur[™] Persulfate) and hydrogen peroxide into the capillary fringe and water-bearing zone to chemically oxidize the VOCs in the groundwater. In all other subdivided areas of the site, the sodium persulfate and hydrogen peroxide mixture was the only injected compound, as augmented bioremediation (HRCx[®]) was ineffective. With the exception of two AOCs ("N" Street and Southwest), the last injection of the sodium persulfate and hydrogen peroxide mixture took place on August 6, 2007. Quarterly groundwater monitoring events at the site continued as planned, starting in January 2008.

Several wells were designated as key groundwater monitoring wells, and were routinely sampled to determine whether the RBTC values had been met, in order to obtain closure for the site. As pertinent to the Park site, the key wells include: MW-23, MW-24 and MW-26 for the Main Excavation; MW-36, MW-37 and MW-41 for the Northern Excavation; and MW-38 for the Knoll. As pertinent to the Residential-use site, the key wells include: MW-9, 17, 18, 39, and 40A for the Area Along "N" Street; MW-3(A) and MW-43 for the Southwest Area; and MW-42 for the Bone Yard.

The following steps were undertaken at the site: (1) the key groundwater monitoring wells were sampled after a period of 60 days following injection; (2) after a 30-day hiatus, the key groundwater monitoring wells were re-sampled; (3) following this last sampling, and a 90-day hiatus, site-wide groundwater sampling was conducted on a quarterly basis.

Steps 1 and 2 were completed in November 2007 and December 2007, respectively. The analytical data indicated that the VOC concentrations in the groundwater were within the residential and/or park standards as established in the RBTC document. In December 2007, a site-wide groundwater sampling was conducted, which included all of the wells at the site. In between steps 1 and 2, there was no further addition of sodium persulfate and hydrogen peroxide mixture to the groundwater. Step 3 was initiated in March 2008.

Subsequently, four quarters of groundwater monitoring were conducted. The fourth quarter groundwater monitoring report was submitted to Board staff by AEC on January 22, 2009, and indicated that the concentrations of TCE and CCl₄ were below Park use RBTCs within all three AOCs. AEC submitted a full and complete report of activities and request for closure on September 22, 2009.

A description of the activities that were conducted in each AOC to achieve the RBTCs is given below:



Park Site

1. Main Excavation AOC

In February 2005, the overburden soil in the Main Excavation area was removed. (The removal activities are fully described in the "Final Site Closure Report, Former GE/EER Facility", dated September 10, 2009.) HRCx[®] was injected at 525 points within the approximately 280-foot by 250-foot excavation to facilitate bioremediation of elevated VOC concentrations. The HRCx[®] treatment was not successful; therefore, in May 2006 a mixture of sodium persulfate (Klozur[™] Persulfate) and hydrogen peroxide was injected into the capillary fringe and water-bearing zone at 99 locations. Four subsequent rounds of post-remedial groundwater quarterly monitoring results demonstrated that TCE concentrations ranged between 37 µg/l and 161 µg/l, and CCl₄ concentrations ranged between 11 µg/l and 490 µg/l, which are below the RBTCs for park use.

2. Northern Excavation AOC

In October 2005 a new Area of Concern (AOC) was discovered during developmental grading, approximately 150-feet north of the northern boundary of the Main Excavation AOC. This AOC was labeled the "Northern Excavation" AOC. Contaminants in this AOC included gasoline-range and diesel-range hydrocarbons, toluene, xylenes, TCE, 1,1-DCA, 1,1-DCE, 1,1,1-TCA, and trimethylbenzene. An investigation of soil gas, soil, and groundwater was conducted in October 2005, to evaluate the lateral and vertical extent of the contamination.

Soil gas was sampled at multiple depths at this AOC. TCE and trichlorofluoro-methane ([Freon 11] TCFM) were the primary VOCs present in soil gas. Soil and groundwater sampling were subsequently conducted to assess the vertical and lateral extent of the TCE and TCFM. Relatively high concentrations of TCE, 1,1,1-TCA, 1,1-DCA, 1,1-DCE, and TCFM were reported in soil and groundwater at only one location.

Approximately 1,065 tons of impacted soil were excavated from the Northern Excavation AOC in May 2006, and transported to the Waste Management, Inc. Lancaster landfill for use as landfill cover. Confirmation sampling as approved by the OCHCA was conducted to demonstrate that the impacted soil had been removed. Approximately 7,800 gallons of the sodium persulfate and hydrogen peroxide mixture were then injected into the saturated zone. Confirmation sampling of the groundwater in July 2006 indicated the continued presence of elevated VOC concentrations. A second round of full-scale injection was conducted in November 2006 in the Northern Excavation AOC by injecting approximately 8,530 gallons of persulfate and hydrogen peroxide mixture at 19 locations.

In the five wells (MW-32, MW-33, MW-36, MW-37, and MW-41) associated with the Northern Excavation AOC, analytical results following four consecutive quarters indicated that the TCE and CCl₄ concentrations ranged from 0.39 µg/l to 5 µg/l and 0.27 µg/l to 5 µg/l, respectively, which are below the RBTCs for park use.

- **Subarea: Adjacent to Portola Springs School Site**

Two 2-inch diameter groundwater monitoring wells (MW-32 and MW-33) were installed near the southwest corner of an Irvine Unified School District (IUSD) proposed new school site (Portola Springs), to assess the perimeter of the former GE/EER plume. The soil samples collected from the two well locations and the water sample collected from MW-32 had no reportable concentrations of perchlorate, VOCs, or TPH. Low concentrations of perchlorate and TCFM were reported in the groundwater collected from MW-33, thus identifying the edge of the northern area

VOC plume, and demonstrating that there is no threat of VOC vapor intrusion from the groundwater into the school site.

The ICDC submitted a preliminary endangerment assessment (PEA) for the proposed school site to staff from the California Department of Toxic Substances Control (DTSC). In a letter dated April 3, 2007, DTSC staff concurred with the adequacy of the PEA, and required no further action to address groundwater conditions on the GE/EER site relative to the school site.

3. Knoll AOC

In April and May 2005, thirteen exploratory soil borings were advanced into groundwater in the area referred to as the Knoll. The Knoll AOC is located southwest of the Main Excavation AOC. Groundwater was encountered at approximately 40 feet bgs at the base of the Knoll, and approximately 80 feet bgs beneath the topographic high of the Knoll. The analytical results of the grab groundwater sampling indicated the existence of a CCl₄ and TCE plume in the central portion of the Knoll, with the CCl₄ concentrations up to 1,630 µg/l and TCE concentrations as high as 1,320 µg/l.

In August 2005, 30 pilot borings were advanced into groundwater and extended release HRCx[®] was injected into the groundwater. In December 2006, MW-38 was installed on top of the Knoll. As augmented bioremediation was found to be ineffective, in April 2007, a mix of persulfate and hydrogen peroxide was injected into the groundwater at 15 locations in the Knoll AOC to oxidize the VOCs.

The CCl₄ and TCE concentrations obtained following the four quarters of post-remedial monitoring in 2008 demonstrated that concentrations of TCE and CCl₄ ranged from 202 µg/l to 331 µg/l and from 612 µg/l to 897 µg/l, respectively, which are below RBTCs for park use.

Residential-use Site

1. Southwest Area AOC

This area included a group of former structures south and southwest of the Main Excavation AOC. Focused soil and groundwater sampling, conducted during 2006-2009, indicated that VOCs, primarily CCl₄, were present in the groundwater.

Twelve injection wells were installed within and along the perimeter of the VOC plume, to allow the injection of hydrogen peroxide and persulfate. The first injections were conducted during 2007. In June 2007, groundwater monitoring well MW-43 was installed to assess the progress of remediation. Following four quarters of post-remedial sampling, TCE and CCl₄ concentrations ranged from 0.39 to 5 µg/l and from 3.8 to 6.7 µg/l, respectively. Four consecutive groundwater monitoring events were performed during 2010 (following three additional sodium persulfate and hydrogen peroxide injections that took place in April and May 2009). The TCE concentrations attenuated to <0.39 µg/l and the CCl₄ concentrations were reduced to <0.27 µg/l in both MW-3(A) and MW-43. The four groundwater sampling events following final injection recorded concentrations for TCE and CCl₄ below residential RBTCs.

2. Bone Yard AOC

The Bone Yard area was formerly used for the storage of used equipment and materials, and was also the former location of a "small volume Btu test unit". This AOC is located approximately 250 feet northwest of existing GE/EER monitoring well MW-5. In February 2006, sampling in the Bone Yard area indicated the following: trace concentrations of "oil

range" hydrocarbons and 1.4 µg/kg of TCE were detected in soil at 40 feet bgs; and 147 µg/l of TCE was detected in a groundwater sample at 62 feet bgs. In March 2006, eight additional borings were advanced in this area. Low concentrations of oil-range hydrocarbons, trace to non-detectable concentrations of CCl₄, and trace detections of TCE were found in the soil; however, elevated TCE concentrations were measured in groundwater.

In April 2007, a mixture of sodium persulfate and hydrogen peroxide was injected, and monitoring well MW-42 was installed to monitor the progress of the remediation. MW-42 was sampled during June, August, October, and December 2007, during which time TCE concentrations decreased from 243 µg/L to 10 µg/L. The well was sampled for four quarters of post-remedial monitoring during 2008, and the TCE concentrations ranged from 4.4 to 5.4 µg/l. These concentrations are below the residential RBTC for TCE of 58.9 µg/l.

3. Area Along "N" Street AOC

The AOC described as the "Area Along "N" Street" is an approximate 300 foot long strip that borders former "N" Street and is proximal to the western boundary of the GE/EER site. Monitoring wells MW-9, MW-17, MW-18, MW-39, and MW-40 are sited within this AOC. In February 2003, URS installed a downgradient well (MW-9) along "N" Street. In December 2004, AEC installed two additional monitoring wells (MW-17 and MW-18), north and south of MW-9, respectively, to assess the potential for downgradient migration of VOC-impacted groundwater. In December 2006, two additional sentinel monitoring wells (MW-39 and MW-40) were installed along "N" Street to evaluate the potential for downgradient migration of VOCs from the Knoll AOC.

Historically, samples from MW-9, MW-17, MW-18, and MW-39 have indicated trace or non-detectable concentrations of TCE and CCl₄ that are below residential RBTCs. By contrast, MW-40 historically exhibited TCE concentrations below the residential RBTC; however, CCl₄ concentrations (21 µg/l) exceeded the residential use RBTC of 0.946 µg/l.

During April and May 2007, nine injection wells were installed, paralleling the east side of "N" Street. During April 2007, prior to injecting the oxidizer in the Knoll AOC, the nine injection wells were utilized to inject sodium persulfate to form a curtain, or barrier zone, of oxidizer that would capture any VOC-impacted groundwater that may be artificially pushed downgradient during the injection at the Knoll AOC.

Following four quarters of monitoring during 2007 and 2008, analytical results indicated that the concentration of TCE and CCl₄ ranged from 1.3 µg/l to 5 µg/l and <5 µg/l to 21 µg/l, respectively. Four consecutive groundwater monitoring events were performed during 2010, following three additional sodium persulfate and hydrogen peroxide injections during April and May 2009. During this monitoring period, TCE concentrations attenuated to <0.39 µg/l and the CCl₄ concentrations were reduced to <0.27 µg/l, below residential use RBTCs.

Other Chemicals

1. Perchlorate (ClO₄) has been identified at low concentrations (with occasional higher detections) in groundwater at the former GE/EER site, and specifically within the Park site. Perchlorate has not been detected in any of the site's soil samples. The pattern of perchlorate detections suggests a diffuse presence of perchlorate in groundwater in several of GE/EER's historic use areas at the site. Perchlorate concentrations have ranged from non-detect to a high of 765 µg/l, with a high variability from quarter to quarter. Much of this

variability has been observed in remedial treatment areas, suggesting an association with the local movement of groundwater, and possibly induced by the injected oxidizing liquids.

The groundwater monitoring data indicate that perchlorate has not migrated off-site. The hydrogeologic characteristics at the site are stable, indicating that the perchlorate plume will also remain stable, and is not expected to migrate. Quarterly groundwater samples from MW-6 and MW-10 depicted concentrations of perchlorate ranging between 12.9 and 210 µg/l. Perchlorate has not been detected at concentrations above the detection limit of 2 µg/l in MW-12, which is located approximately 35 feet upgradient of MW-6 and MW-10. The five sentinel downgradient wells along "N" Street (MW-39, MW-40, MW-17, MW-9, and MW-18) have been sampled and analyzed on a quarterly basis since their installation in 2004 and 2006, and have consistently exhibited trace to non-detectable concentrations of perchlorate and VOCs.

2. Petroleum and metal impacted soils have been identified at the site. These have been remediated by excavation under the direction of OCHCA staff, and a no further action determination was made by the OCHCA (OCHCA Case Closure Letter, July 26, 2007).

Land Use Covenants

Based on the extensive data available for the former GE/EER site, and in consideration of current conditions at the site, the proposed Park site was determined by Board staff to be suitable for park and other compatible and related uses. Similarly, the proposed Residential-use site was deemed by Board staff as suitable for residential use. Therefore, the Board entered into land use covenants (LUCs) with the ICDC, covering the Park site and the Residential-use site. The LUCs were recorded with the County of Orange Recorder's Office on March 9, 2011 (Enclosures 2 and 3). The specifications of the LUCs are incorporated as conditions of the no further action determination for the former GE/EER site.

Specific conditions of the LUCs provide that:

- Development and use of the **Park site** shall be restricted to park, recreational, open space and compatible and related purposes or uses, including but not limited to placement of utilities;
- No residential developments, hospitals, schools for persons under the age of 21 or day care centers for children or senior citizens shall be permitted on the **Park site**;
- All uses and development of the **Park site** shall be consistent with any applicable Board Order or Risk Management Plan, each of which is hereby incorporated as a condition of the NFA determination, and including future amendments thereto;
- There shall be no excavation work at depths greater than 15 feet bgs on either the **Park site or the Residential-use site**, unless expressly permitted in writing by the Board. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of local, State and federal law;
- Any excavation conducted on either the **Park site or the Residential-use site** at depths greater than 15 feet bgs shall be performed pursuant to an appropriate and fully implemented Health and Safety Plan;
- There shall be no drilling, boring or use of wells, at either the **Park site or the Residential-use site**, for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board;

- The Board, and any persons acting pursuant to Board orders, shall have reasonable access to the **Park site and Residential-use site** for the purposes of inspection, surveillance, maintenance, or monitoring; and;
- No Owner or Occupant shall act in any manner that threatens or is likely to aggravate or contribute to the existing contaminated conditions of either the **Park site or the Residential-use site**.

Conditional Determination of No Further Action

Based on the results of post-remediation monitoring, the concentrations of the constituents of concern at the site, and the depth at which they are found, the specified areas of the site are acceptable for residential and other sensitive land use, park, recreational, open space and compatible and related purposes or uses, subject to the terms of the LUCs, and do not pose a threat to the beneficial uses of the groundwater in the Irvine Groundwater Management Zone. Therefore, provided that the conditions of the LUCs are met, no further action is necessary with respect to the soil and groundwater at the site.

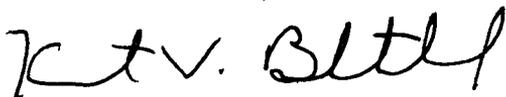
This NFA determination is based on available information, with the provisions that (1) the information that was submitted to Board staff was accurate and representative of Site conditions, and (2) all specifications contained in the enclosed LUCs are to be met.

Please note that you will receive at least one additional invoice for the current billing period, which will include the costs of our staff's review of the Site reports and preparation of this NFA determination letter.

As with any real property, if previously unidentified contamination is discovered at the site in the future, additional assessment, investigation and/or remediation may be required.

If you have any questions, please contact Ann Sturdivant, Chief of our Site Cleanup Section, at (951) 782-4904 or asturdivant@waterboards.ca.gov.

Sincerely,



Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

Enclosures:

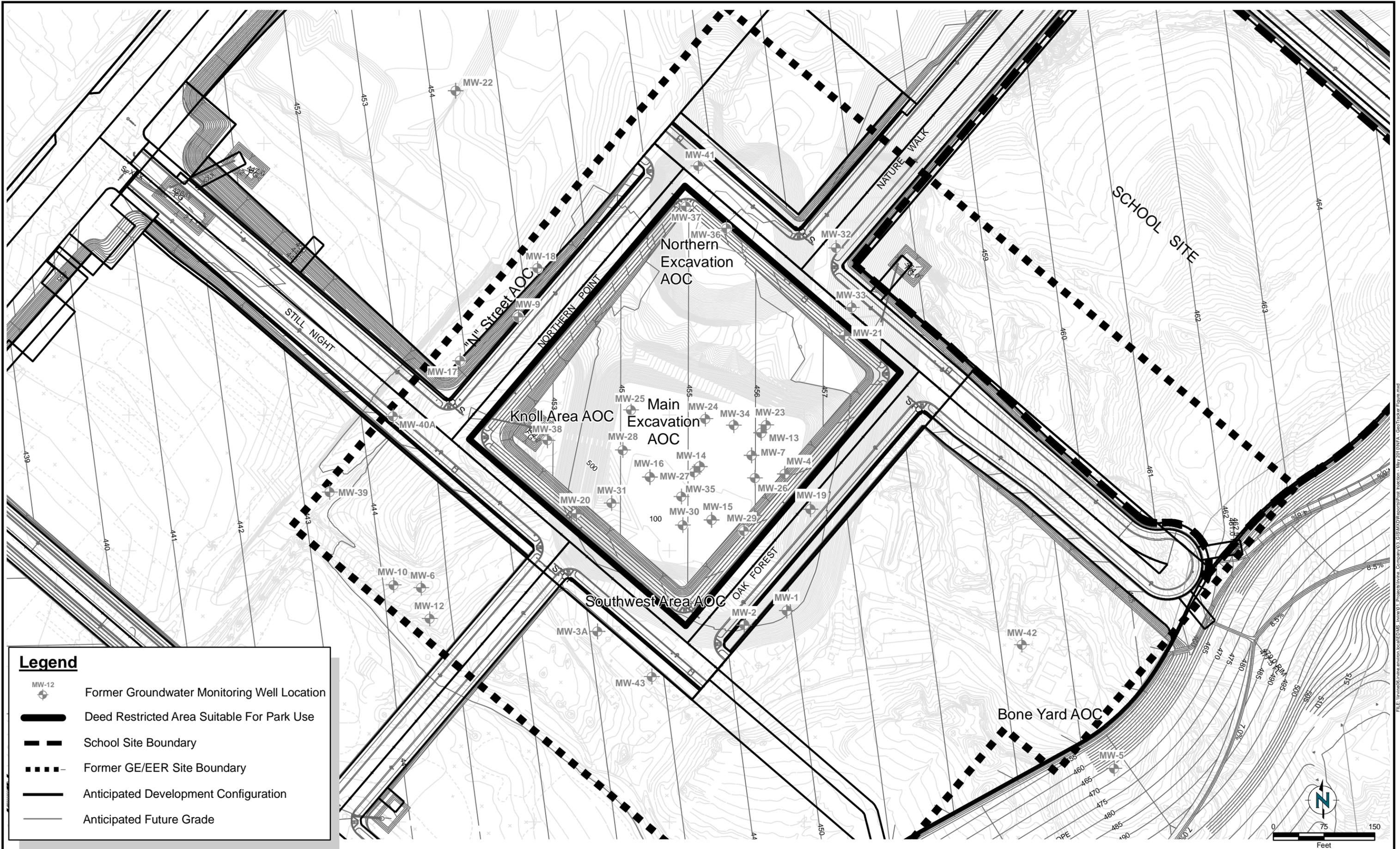
1. Figure showing Areas of Concern (AOCs) at the former GE/EER site
2. LUC for Park-use site, former GE/EER property
3. LUC for Residential-use site, former GE/EER property

cc w/enclosures:

Dean Kirk, Irvine Company (dkirk@irvinecompany.com)

Jon Buck, AEC (jon@advanced-ec.com)

Nicholas Targ, Holland & Knught LLP (Nicholas.targ@hklaw.com)



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**COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY
CALIFORNIA CIVIL CODE SECTION 1471**

Former General Electric/Energy and Environmental Research Facility
8001 Irvine Boulevard, Irvine, CA

APN: 580-076-01

Geo Tracker # SL208584045; PCA Code 2085800

This Covenant and Environmental Restriction on Property ("Covenant") is made as of the 28th day of February, 2011 by Irvine Community Development Company LLC, a Delaware limited liability company ("Covenantor") who is the Owner of record of that certain property situated at 8001 Irvine Boulevard in the City of Irvine, County of Orange, State of California, which is more particularly described in Exhibits A and B attached hereto and incorporated herein by this reference (hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, Santa Ana Region ("Board"), with reference to the following facts:

A. Nature of Covenant. This Covenant is an environmental covenant provided for by Civil Code section 1471 and required by the Board pursuant to Water Code section 13304 because the Burdened Property is contaminated by hazardous materials as defined in section 25260 of the Health and Safety Code.

B. Areas of Burdened Property Affected By Covenant. The Restrictions (defined below) in this Covenant apply to the distinct area identified as "Lot 2". This area is more particularly specified and described in Exhibits "A" and "B". This deed restriction limits the development and use of the Burdened Property to park/open space and other related or consistent uses (e.g., utilities, irrigation), and prohibits residential, commercial or industrial uses. This deed restriction prohibits the use of groundwater beneath the Burdened Property as a source of water for domestic, irrigation, or industrial uses, and requires a written approval by the Water Board for excavations/drilling to depths greater than 15 feet below ground surface (bgs).

C. Contamination of the Burdened Property. The soil, soil gas and groundwater at the Burdened Property were impacted as the result of operations conducted by various companies related to the manufacture and testing of rocket engines, small missiles, shaped charges, flares, and separation devices, and testing of various burner configurations for high efficiency, low emission commercial boilers; such operations were conducted by Ford, General Electric, and their subsidiaries, among others. The known contamination originally consisted of various volatile organic chemicals including trichloroethylene (TCE), 1,1-dichloroethylene (DCE), 1,1-dichloroethane (DCA), and carbon tetrachloride. In addition, the contamination also includes petroleum hydrocarbons and perchlorate (ClO₄).

D. Exposure Pathways. The contaminants addressed in this Covenant are present at the capillary fringe and in groundwater at the Burdened Property. Without the mitigation measures which have been performed on the Burdened Property, exposure to these contaminants could take place via in-place contact, surface-water runoff, and wind dispersal, resulting in dermal contact, inhalation, or ingestion by humans, etc. The risk of public exposure to the contaminants has been substantially lessened by the remediation and controls described herein.

E. Land Uses and Population Potentially Affected. The Burdened Property is planned for use as park/open space and other related and consistent uses (e.g., utilities, irrigation) and is adjacent to residential and associated land uses.

F. Disclosure and Sampling. Disclosure of the presence of hazardous materials on the Burdened Property has been made to the Board and extensive sampling of the Burdened Property has been conducted.

G. Use of Burdened Property. Covenantor desires and intends that in order to benefit the Board, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that might result from any hazardous materials that might remain deposited on portions of the Burdened Property.

ARTICLE I GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. These Restrictions are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors, assigns, and lessees thereof for the

benefit of the Board and all Owners and Occupants. Each and all of the Restrictions: (a) are imposed upon the entire Burdened Property, unless expressly stated as applicable to a specific portion of the Burdened Property; (b) run with the land pursuant to section 1471 of the Civil Code; and (c) are enforceable by the Board.

1.2 Concurrence of Owners and Lessees Presumed. All purchasers, lessees, and possessors of all or any portion of the Burdened Property shall become Owners or Occupants as defined herein and shall be deemed by their purchase, leasing, or possession of the Burdened Property to be bound by the Restrictions and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions herein established must be adhered to for the benefit of the Board and all Owners and Occupants, and that the interest of all Owners and Occupants of the Burdened Property shall be subject to the Restrictions.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions shall be incorporated in and attached to each and all deeds and leases of all or any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the Board real property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

ARTICLE II DEFINITIONS

2.1 Board. "Board" shall mean the California Regional Water Quality Control Board, Santa Ana Region and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, structures, roads, driveways, gradings, re-gradings, and paved areas, constructed or placed upon any portion of the Burdened Property.

2.3 Occupant or Occupants. "Occupant" or "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and Covenantor's successors in interest who hold title to all or any portion of the Burdened Property. Following Covenantor's divesture of all interest in the Burdened Property, Covenantor shall not be deemed an Owner as that term is defined, herein.

ARTICLE III

DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

- a. Development and use of the Burdened Property shall be restricted to park, recreational, open space and compatible and related purposes or uses, including but not limited to placement of utilities;
- b. No residence for human habitation shall be permitted on the Burdened Property;
- c. No hospitals shall be permitted on the Burdened Property;
- d. No public or private schools for persons under 21 years of age shall be permitted on the Burdened Property;
- e. No care or community centers for children or senior citizens, or other uses that would involve the regular congregation of children or senior citizens, shall be authorized on the Burdened Property;
- f. No Owner or Occupant shall conduct or permit any excavation work at depths greater than 15 feet bgs on the Burdened Property, unless expressly permitted in writing by the Board. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by the Owner, Owner's agent, Occupant or Occupant's agent in accordance with all applicable provisions of local, state and federal law;
- g. Any excavation conducted on the Burdened Property at depths greater than 15 feet bgs shall be performed pursuant to an appropriate and fully implemented Health and Safety Plan;
- h. All uses and development of the Burdened Property shall be consistent with any applicable Board Order or Risk Management Plan, each of which is hereby incorporated herein by reference, and including future amendments thereto. ;
- i. No Owner or Occupant shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board; nor shall the Owner or Occupant permit or engage any third party to do such acts;
- j. The Covenantor agrees that the Board, and any persons acting pursuant to Board orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring as provided in Division 7 of the Water Code; and
- l. No Owner or Occupant shall act in any manner that threatens or is likely to

aggravate or contribute to the existing contaminated conditions of the Burdened Property.

3.2 Enforcement. Failure of an Owner or Occupant to comply with any of the Restrictions set forth in Paragraph 3.1 shall be grounds for the Board, by the authority of this Covenant, to require that the Owner or Occupant modify or remove, or cause to be modified or removed, any Improvements constructed in violation of that Paragraph. Violation of this Covenant shall also be grounds for the Board to file civil actions against the Owner or Occupant as provided by law.

3.3 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to all or any portion of the Burdened Property. Any such instrument shall contain the following statement:

The land described herein contains hazardous materials in soils and in the groundwater under the property, and is subject to a Covenant and Environmental Restriction dated as of _____, 20____, and recorded on _____, 20____, in the Official Records of _____ County, California, as Document No. _____, which Covenant and Environmental Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

ARTICLE IV VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with Paragraph 4.2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

ARTICLE V MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other

communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (a) when delivered, if personally delivered to the person being served or an official of a government agency being served, or (b) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested, addressed:

If To: "Covenantor"
Irvine Community Development Company LLC
Attention: Michele Leondis
550 Newport Center Drive
Newport Beach, California 92660

Portola Springs Community Association
c/o Keystone Pacific Property Management Company
16845 Von Karman, Suite 200
Irvine, CA 92606-4920

If To: "Board"
Regional Water Quality Control Board
Santa Ana Region
Attention: Executive Officer
3737 Main Street, Suite 500
Riverside, CA 92501-3348

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined by a court having jurisdiction to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Recordation. This instrument shall be executed by the Covenantor and by the Executive Officer of the Board. This instrument shall be recorded by the Covenantor in the County of Orange within ten (10) days of the date of execution.

5.5 References. All references to Code sections include successor provisions.

5.6 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to preserve and implement the purpose of this instrument and the policies and purposes of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

**[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK;
SIGNATURES ON FOLLOWING PAGES]**

Covenantor: IRVINE COMMUNITY DEVELOPMENT COMPANY LLC
Print Name: THOMAS HEGGI
Signature: [Signature]
Title: VICE PRESIDENT
Date: 2.28.11

CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of ORANGE

On Feb. 28, 2011 before me, DONNA R. BRADLEY,

Notary Public, personally appeared

THOMAS HEGGI, who proved

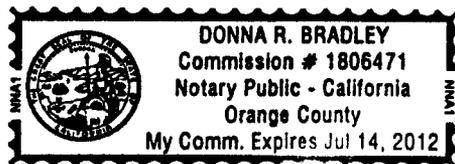
to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[Signature]
Signature of Notary Public

(Notary Seal)



California Regional Water Quality Control Board, Santa Ana Region

Print Name: Kurt V. Berchtold

Signature: *K.V. Berchtold*

Title: Executive Officer

Date: 3/3/11

CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of Riverside

On March 3, 2011 before me, Rosalind Newsom,

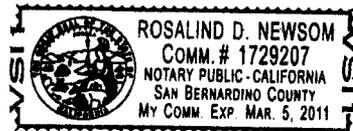
Notary Public, personally appeared

Kurt Victor Berchtold, who proved

to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Rosalind Newsom
Signature of Notary Public

(Notary Seal)

EXHIBIT "A"

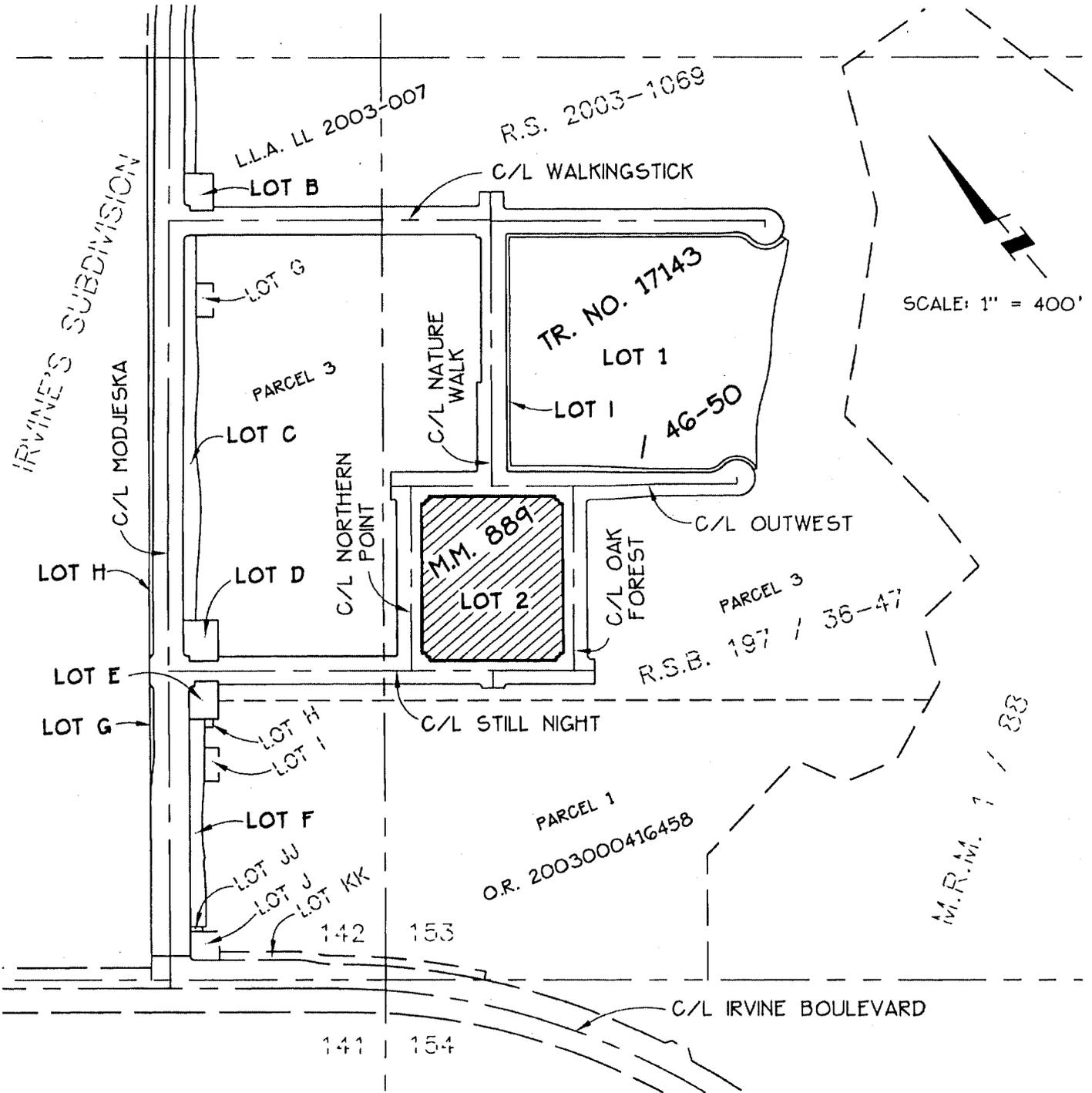
LOT 2 OF TRACT NO. 17143, IN THE CITY OF IRVINE, COUNTY OF ORANGE,
STATE OF CALIFORNIA, PER MAP FILED IN BOOK 889, PAGES 46 THROUGH 50,
INCLUSIVE, OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER
OF SAID COUNTY.

ALL AS MORE PARTICULARLY SHOWN ON EXHIBIT "B" ATTACHED HERETO AND
HEREBY MADE A PART HEREOF.

EXHIBIT "B"

SHEET 1 OF 1

LOT 2 OF TR. NO. 17143, M.M. 889 / 46-50,
IN THE CITY OF IRVINE, COUNTY OF ORANGE, STATE OF CALIFORNIA
DEED RESTRICTION



STANTEC CONSULTING INC.
19 TECHNOLOGY DRIVE
IRVINE, CA 92618
949.923.6000

stantec.com

Stantec

Recording Requested By

First American Title NHS

2642646

Recording Requested By:

Irvine Community Development Company
555 Newport Center Drive
Newport Beach, California 92660

This Document was electronically recorded by
First American NHS Rancho Cucamonga

Recorded in Official Records, Orange County
Tom Daly, Clerk-Recorder



2011000125127 10:18am 03/09/11

66 406 C39 11
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When Recorded, Mail To:

Kurt Berchtold, Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

**COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY
CALIFORNIA CIVIL CODE SECTION 1471**

Former General Electric/Energy and Environmental Research Facility
8001 Irvine Boulevard, Irvine, CA

Portions of APNs: 580-071-16, 580-071-21, 580-073-04, 580-073-05, 580-075-01,
580-075-02, 580-084-15, and 580-084-17.

Geo Tracker # SL208584045; PCA Code 2085800

This Covenant and Environmental Restriction on Property ("Covenant") is made as of the 28th day of February, 20 11 by Irvine Community Development Company LLC, a Delaware limited liability company ("Covenantor") who is the Owner of record of that certain property situated at 8001 Irvine Boulevard in the City of Irvine, County of Orange, State of California, which is more particularly described in Exhibits A and B attached hereto and incorporated herein by this reference (hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, Santa Ana Region ("Board"), with reference to the following facts:

A. Nature of Covenant. This Covenant is an environmental covenant provided for by Civil Code section 1471 and required by the Board pursuant to Water Code section 13304 because the Burdened Property is contaminated by hazardous materials as defined in section 25260 of the Health and Safety Code.

B. Areas of Burdened Property Affected By Covenant. The Restrictions (defined below) in this Covenant apply to the distinct area specified and described in Exhibits "A" and "B". This deed restriction prohibits the use of groundwater beneath the Burdened Property for domestic, irrigation, and industrial uses, and requires a written approval by the Water Board for excavation/drilling to depths greater than 15 feet below ground surface ("bgs"). This deed restriction otherwise imposes no limitations on the development and use of the Burdened Property and specifically allows for unrestricted residential, commercial, or industrial uses, and the construction of schools for persons under 21 years, hospitals, community centers for children or senior citizens and other sensitive land uses.

C. Contamination of the Burdened Property. The soil, soil gas and groundwater at the Burdened Property were impacted as the result of operations conducted by various companies related to the manufacture and testing of rocket engines, small missiles, shaped charges, flares, and separation devices, and testing of various burner configurations for high efficiency, low emission commercial boilers; such operations were conducted by Ford, General Electric, and their subsidiaries, among others. The known contamination originally consisted of various volatile organic chemicals including trichloroethylene (TCE), 1,1-dichloroethylene (DCE), 1,1-dichloroethane (DCA), and carbon tetrachloride. In addition, the contamination also includes petroleum hydrocarbons and perchlorate (ClO₄). By means of excavation and in-situ chemical oxidation, the known contamination has been reduced to concentrations below Risk Based Target Concentrations for residential and other sensitive uses.

D. Exposure Pathways. The contaminants addressed in this Covenant are present at the capillary fringe and in groundwater at the Burdened Property. Without the mitigation measures, which have been performed on the Burdened Property, exposure to these contaminants could take place via in-place contact, surface-water runoff, and wind dispersal, resulting in dermal contact, inhalation, or ingestion by humans. The risk of public exposure to the contaminants has been substantially lessened by the remediation and controls described herein.

E. Land Uses and Population Potentially Affected. The Burdened Property is planned for residential, school for students under the age of 21, associated uses, and potentially other sensitive land uses.

F. Disclosure and Sampling. Disclosure of the presence of hazardous materials on the Burdened Property has been made to the Board and extensive sampling of the Burdened Property has been conducted.

G. Use of Burdened Property. Covenantor desires and intends that in order to benefit the Board, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that might result from any hazardous materials that might remain deposited on portions of the Burdened Property.

ARTICLE I GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. These Restrictions are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land and pass with each and every portion of the Burdened Property, and shall apply to, inure to the

benefit of, and bind the respective successors, assigns, and lessees thereof for the benefit of the Board and all Owners and Occupants. Each and all of the Restrictions: (a) are imposed upon the entire Burdened Property, unless expressly stated as applicable to a specific portion of the Burdened Property; (b) run with the land pursuant to section 1471 of the Civil Code; and (c) are enforceable by the Board.

1.2 Concurrence of Owners and Lessees Presumed. All purchasers, lessees, and possessors of all or any portion of the Burdened Property shall become Owners or Occupants as defined herein and shall be deemed by their purchase, leasing, or possession of the Burdened Property to be bound by the Restrictions and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions herein established must be adhered to for the benefit of the Board and all Owners and Occupants, and that the interest of all Owners and Occupants of the Burdened Property shall be subject to the Restrictions.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions shall be incorporated in and attached to each and all deeds and leases of all or any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the Board real property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

ARTICLE II DEFINITIONS

2.1 Board. "Board" shall mean the California Regional Water Quality Control Board, Santa Ana Region and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, structures, roads, driveways, gradings, re-gradings, and paved areas, constructed or placed upon any portion of the Burdened Property.

2.3 Occupant or Occupants. "Occupant" or "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and Covenantor's successors in interest who hold title to all or any portion of the Burdened Property. Following Covenantor's divesture of all interest in the Burdened Property, Covenantor shall not be deemed an Owner as that term is defined, herein.

ARTICLE III
DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

a. No Owner or Occupant shall conduct or permit any excavation work to depths greater than 15 feet bgs on the Burdened Property, unless expressly permitted in writing by the Board. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by the Owner, Owner's agent, Occupant or Occupant's agent in accordance with all applicable provisions of local, state and federal law;

b. Any excavation conducted to depths great than 15 feet bgs on the Burdened Property shall be performed pursuant to an appropriate and fully implemented Health and Safety Plan;

c. No Owner or Occupant shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board; nor shall the Owner or Occupant permit or engage any third party to do such acts;

d. The Covenantor agrees that the Board, and any persons acting pursuant to Board orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring as provided in Division 7 of the Water Code; and

e. No Owner or Occupant shall act in any manner that threatens or is likely to aggravate or contribute to the existing contaminated conditions of the Burdened Property.

3.2 Enforcement. Failure of an Owner or Occupant to comply with any of the Restrictions set forth in Paragraph 3.1 shall be grounds for the Board, by the authority of this Covenant, to require that the Owner or Occupant modify or remove, or cause to be modified or removed, any Improvements constructed in violation of that Paragraph. Violation of this Covenant shall also be grounds for the Board to file civil actions against the Owner or Occupant as provided by law.

3.3 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to all or any portion of the Burdened Property. Any such instrument shall contain the following statement:

The land described herein contains hazardous materials in soils and in the groundwater under the property, and is subject to a

Covenant and Environmental Restriction dated as of _____, 20____, and recorded on _____, 20____, in the Official Records of _____ County, California, as Document No. _____, which Covenant and Environmental Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

ARTICLE IV VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with Paragraph 4.2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

ARTICLE V MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (a) when delivered, if personally delivered to the person being served or an official of a government agency being served, or (b) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested, addressed:

If To: "Covenantor"
Irvine Community Development Company LLC
Attention: Michele Leondis
550 Newport Center Drive
Newport Beach, California 92660

Portola Springs Community Association
c/o Keystone Pacific Property Management Company
16845 Von Karman, Suite 200
Irvine, CA 92606-4920

If To: "Board"
Regional Water Quality Control Board
Santa Ana Region
Attention: Executive Officer
3737 Main Street, Suite 500
Riverside, CA 92501-3348

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined by a court having jurisdiction to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Recordation. This instrument shall be executed by the Covenantor and by the Executive Officer of the Board. This instrument shall be recorded by the Covenantor in the County of Orange within ten (10) days of the date of execution.

5.5 References. All references to Code sections include successor provisions.

5.6 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to preserve and implement the purpose of this instrument and the policies and purposes of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

**[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK;
SIGNATURES ON FOLLOWING PAGES]**

Covenantor: IRVINE COMMUNITY DEVELOPMENT COMPANY LLC
Print Name: THOMAS HEGGI
Signature: [Signature]
Title: VICE PRESIDENT
Date: 2.28.11

CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of ORANGE

On Feb 28, 2011 before me, DONNA R. BRADLEY

Notary Public, personally appeared

THOMAS HEGGI, who proved

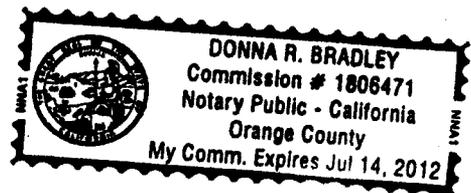
to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[Signature]
Signature of Notary Public

(Notary Seal)



California Regional Water Quality Control Board, Santa Ana Region

Print Name: Kurt V. Berchtold

Signature: K.V. Berchtold

Title: Executive Officer

Date: 3/3/11

CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of Riverside

On March 3, 2011 before me, Rosalind Newsom,

Notary Public, personally appeared

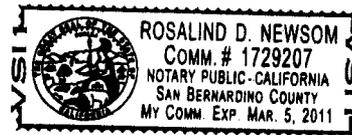
Kurt Victor Berchtold, who proved

to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Rosalind Newsom
Signature of Notary Public



(Notary Seal)

EXHIBIT "A"
GE SITE

BEING PORTIONS OF LOT 1, LOT I, NORTHERN POINT, NATURE WALK, OUTWEST, OAK FOREST AND STILL NIGHT OF TRACT NO. 17143, IN THE CITY OF IRVINE, COUNTY OF ORANGE, STATE OF CALIFORNIA, PER MAP FILED IN BOOK 889, PAGES 46 THROUGH 50, INCLUSIVE, OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, TOGETHER WITH PORTIONS OF PARCELS 1 AND 3 OF LOT LINE ADJUSTMENT LL 2003-007 RECORDED APRIL 15, 2003 AS INSTRUMENT NO. 2003000416458 OF OFFICIAL RECORDS, IN SAID OFFICE OF THE COUNTY RECORDER, DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTERLINE INTERSECTION OF MODJESKA AND STILL NIGHT AS SHOWN ON SAID TRACT NO. 17143;

THENCE, ALONG SAID CENTERLINE OF STILL NIGHT, SOUTH 49°23'49" EAST, 585.96 FEET TO THE POINT OF BEGINNING;

THENCE, NORTH 40°36'11" EAST, 750.70 FEET;

THENCE, SOUTH 49°23'49" EAST, 1095.00 FEET;

THENCE, SOUTH 40°36'11" WEST, 540.00 FEET;

THENCE, NORTH 49°23'49" WEST, 94.00 FEET;

THENCE, SOUTH 40°36'11" WEST, 455.70 FEET;

THENCE, NORTH 49°23'49" WEST, 1001.00 FEET TO THE SOUTHWESTERLY PROLONGATION OF THE HEREINABOVE DESCRIBED COURSE HAVING A BEARING AND DISTANCE OF "NORTH 40°36'11" EAST, 750.70 FEET";

THENCE, ALONG SAID SOUTHWESTERLY PROLONGATION, NORTH 40°36'11" EAST, 245.00 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM LOT 2 OF SAID TRACT NO. 17143.

CONTAINING 19.741 ACRES, MORE OR LESS.

EXHIBIT "A"
GE SITE

ALSO AS SHOWN ON EXHIBIT "B" ATTACHED HERETO AND HEREBY MADE A PART
HEREOF.

SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS,
EASEMENTS AND RIGHTS-OF-WAY OF RECORD, IF ANY.



PREPARED BY: STANTEC CONSULTING INC.
UNDER THE DIRECTION OF:

James O. Steines

JAMES O. STEINES, P.L.S. 6086

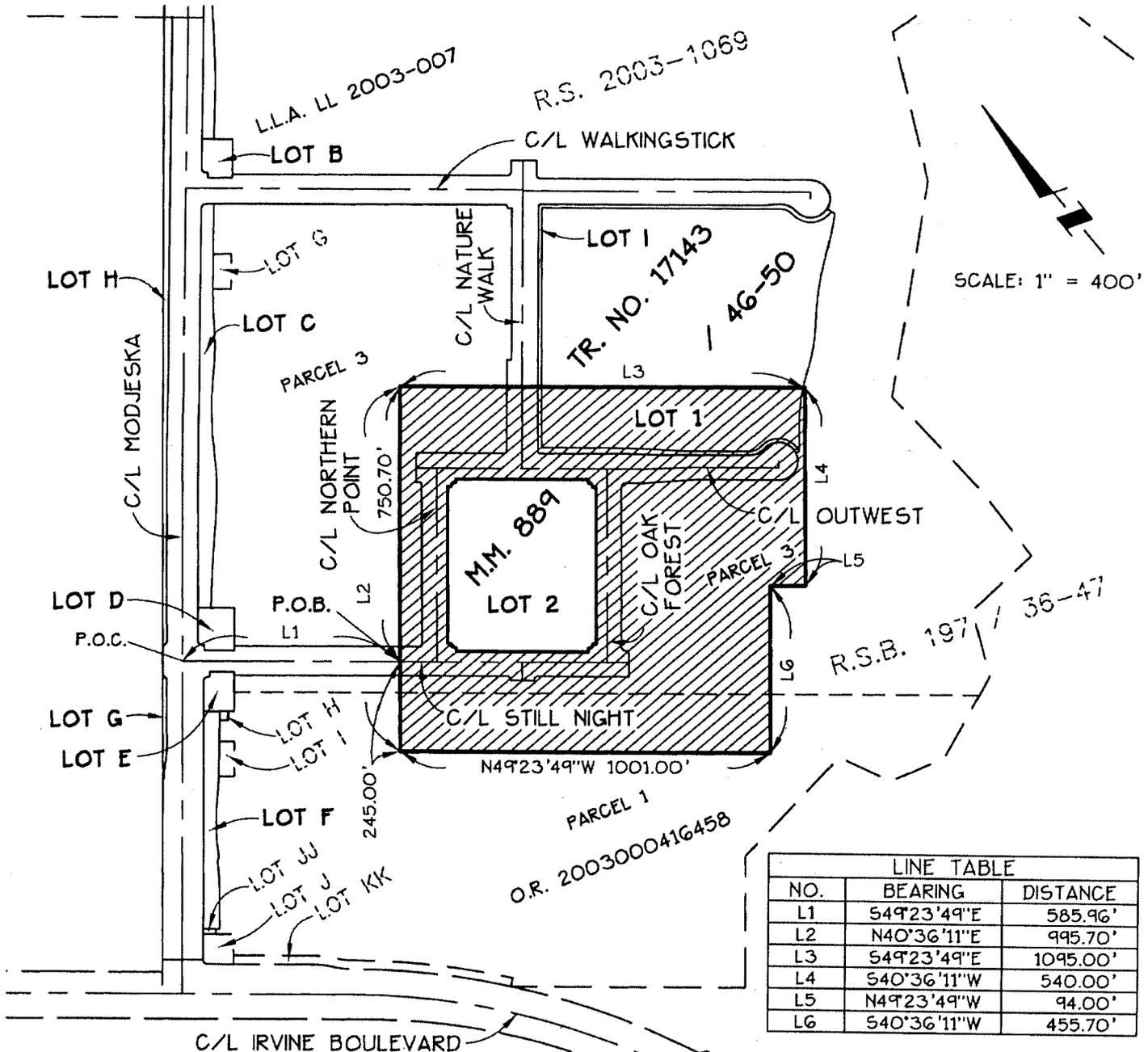
DECEMBER 20, 2010
J.N. 2043 403114

EXHIBIT "B"

SHEET 1 OF 1

PORTIONS OF LOT 1, LOT I, NORTHERN POINT, NATURE WALK, OUTWEST, OAK FOREST, AND STILL NIGHT OF TR. NO. 17143, M.M. 889 / 46-50, TOGETHER WITH PORTIONS OF PARCELS 1 AND 3 OF L.L.A. LL 2003-007, O.R. 2003000416458, IN THE CITY OF IRVINE, COUNTY OF ORANGE, STATE OF CALIFORNIA

GE SITE



LINE TABLE		
NO.	BEARING	DISTANCE
L1	S49°23'49"E	585.96'
L2	N40°36'11"E	995.70'
L3	S49°23'49"E	1095.00'
L4	S40°36'11"W	540.00'
L5	N49°23'49"W	94.00'
L6	S40°36'11"W	455.70'



James O. Steines
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