FIGURES

Legend

- Parking Lot
- Building
- Orchard
- Landscaped Area
- Roadways in the Redevelopment Area
- Outline of Redevelopment Area
- Outline of PG&E Electrical Substation
- Outline of Parcel O-6
- Outline of Core Area
- lake
- Sample locations on parking lots
- Sample locations on roadways

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1,000 500 0 Feet

ENVIRON

Proposed Soil Sampling Locations for Former Orchard Areas
Hitachi GST, San Jose, California

Date:	Contract Number:		Figure
11/2/05	03-11903E		VI.1
Drafter: RS	Approved:	Revised:	

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ATTACHMENT VII
SOIL INSPECTION/SAMPLING PLAN
FOR ENDICOTT BOULEVARD/TUCSON WAY

Original: August 22, 2005
Revision 1: January 31, 2006

ATTACHMENT VII

SOIL INSPECTION/SAMPLING PLAN FOR ENDICOTT BOULEVARD/TUCSON WAY

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ACRONYMS

bgs	below ground surface
CCR	Current Conditions Report
DJPA	David J. Powers & Associates
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
GPA	General Plan Amendment
GST	Global Storage Technologies
HHRA	Human Health Risk Assessment
IBM	International Business Machines
PD	Planned Development
RBTC	Risk-Based Target Concentration
RWQCB-SF	Regional Water Quality Control Board, San Francisco Bay Region
STL	Severn Trent Laboratories
TPH	Total Petroleum Hydrocarbons
USEPA	United States Environmental Protection Agency
ft	foot
ppm	part per million

ATTACHMENT VII
SOIL INSPECTION/SAMPLING PLAN
FOR ENDICOTT BOULEVARD/TUCSON WAY

VII.1 Overview

Recently, David J. Powers & Associates (DJPA) prepared an Environmental Impact Report (EIR) for the proposed General Plan Amendment (GPA) and Planned Development (PD) Zoning on the approximately 332-acre Hitachi Global Storage Technologies, Inc. (Hitachi GST) property located at 5600 Cottle Road, San Jose, California ("the Site"). The City of San Jose Planning Commission certified the Final EIR on June 6, 2005 (City of San Jose 2005a, 2005b). As part of the EIR, ENVIRON International Corporation (ENVIRON) prepared a screening human health risk assessment (Screening HHRA) to evaluate the potential impacts on human health for Parcels O-1 through O-5, termed the Redevelopment Area (approximately 131 acres). In 2005, ENVIRON prepared a Draft Current Conditions Report (CCR) (ENVIRON, 2005) for the Redevelopment Area and Endicott Boulevard/Tucson Way. Hitachi GST will be transferring ownership of Endicott Boulevard/Tucson Way to the City of San Jose.

The purpose of this Soil Inspection/Sampling Plan is to address the following area identified in the Draft CCR as needing additional evaluation/investigation of soil:

- The vadose zone beneath Tucson Way located near Building 110 where an accidental Shell Sol 140 release occurred in 1985.

The location of this area is shown in Figure VII.1. The results of this Soil Inspection/Sampling Plan will be used to determine if any mitigation/remediation measures are needed at the Site due to the presence of total petroleum hydrocarbons (TPH) and Shell Sol 140 constituents in the vadose zone.

VII.2 History

Tucson Way is located at the northern boundary of the Core Area, near Building 110, and parallel to the Union Pacific railroad and Monterey Highway. The accidental Shell Sol 140 release in November 1985 occurred in close proximity to this roadway. The roadway was called Perimeter Road in past remediation and soil investigation reports.

In order to minimize the off-Site migration of free-phase Shell Sol 140, a subsurface drain system with five sumps was installed near the center of Tucson Way. This remedial action resulted in the movement of free Shell Sol 140 in soils toward the roadway, and some

residual free product may have been entrapped in the soil beneath the roadway. Dissolved Shell Sol 140, benzene, toluene, and xylenes were subsequently found in the groundwater monitoring wells along Tucson Way.

The remediation effort was focused in the area near the wastewater treatment facility (Building 110C). Full-scale operation of a dual-phase extraction system began in June 1993 to treat contaminated soil and groundwater in that area. The Shell Sol hydraulic control system was installed and operated to remediate groundwater and a Soil Vapor Extraction system was installed and operated to remediate soil. The closure of the dual-phase extraction system was approved by the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB-SF) in March 1995. However, no soil samples were taken in the Shell Sol 140 Release Area to confirm that the soil cleanup goal (1 part per million [ppm]) was met.

As indicated in past remedial investigations reports, the extent and distribution of free-phase Shell Sol 140 in the subsurface is difficult to characterize because building structures, backfill material, and undetected sand or gravel deposits all affect the movement of free product. Recent (January 2004) groundwater sampling data reveal concentrations of TPH (up to 170 ppm) near the Shell Sol 140 Release Area, suggesting that some constituents of Shell Sol 140 still remain in the subsurface and have not been biodegraded.

Considering the following: 1) potentially incomplete coverage of the remediation system over Tucson Way; 2) no historical soil data to show the level of Shell Sol 140 beneath the roadway; 3) difficulties in delineating the Shell Sol 140 impact area; and 4) recent detection of concentrations of TPH compounds in groundwater near the Shell Sol 140 Release Area, ENVIRON recommends that a limited number of soil samples be collected in the area beneath Tucson Way to confirm that any residual concentrations are below risk-based target concentrations (RBTCs).

VII.3 Project Planning

Soil beneath Tucson Way will be sampled according to the sampling plan presented in Section VII.4 below. Because a portion of this area is a restricted area under the Hitachi GST deed restriction, the RWQCB-SF and International Business Machines (IBM) will be notified prior to any intrusive activities. It is possible that the sampling will be considered as “excavation” under the deed restriction, in which case a formal written exemption from the deed restriction would be required from the RWQCB-SF to sample below 15 feet (ft) in the restricted area. The sampling can begin once all approvals, including of the approval of the Soil Inspection/Sampling Plan, are obtained.

VII.4 Implementation of Soil Sampling

Proposed sampling locations for TPH and Shell Sol beneath Tucson Way are shown on Figure VII.1. Prior to initiating any field activities, ENVIRON will conduct a survey of underground utilities at proposed sampling locations, arrange for drilling and analytical laboratory subcontractors, and update the Site-specific health and safety plan.

The number of borings and their approximate locations are summarized in Table VII.1 and shown in Figure VII.1. Typically soil borings will be drilled to 30 ft below ground surface (bgs) at the proposed locations using direct-push technology. The core will be field screened for evidence of TPH and soil samples selected from five depth intervals: 5ft, 10ft, 15ft, 20ft, and 25ft. The exact depth of each sample may be adjusted depending on field screening. Field screening will be based on visual staining or odoriferous evidence of petroleum. It is anticipated that a total of 30 soil samples will be collected for analysis from the proposed locations.

Samples will be submitted to Severn Trent Laboratories (STL), a California State-certified analytical laboratory. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under chain of custody protocol for analysis for TPH as kerosene and diesel by the United States Environmental Protection Agency (USEPA) Methods 8015M (kerosene) and 8260 (diesel). The samples will be analyzed on a 10-day turnaround time, unless otherwise agreed upon with Hitachi GST and the laboratory.

VII.5 Data Management and Reporting

Upon receipt of the analytical results, ENVIRON will prepare a summary table of the data and compare the results to the RBTCs previously developed for the Site in the Screening HHRA/Draft CCR. Based on this evaluation, a recommendation will be made for no further action, further investigation, and/or remediation. The results of this evaluation will be summarized in a short letter report (plus tables and figures) to be submitted to the Department of Toxic Substances Control (DTSC).

VII.6 Project Schedule

As the sampling locations on Tucson Way are currently accessible, it is anticipated that the sampling can be completed in approximately two weeks (including field and analytical) after authorization to proceed.

VII.7 References

City of San Jose, California. 2005a. Draft Environmental Impact Report. Hitachi Campus and Mixed-Use Transit Village Project. General Plan Amendment (GP04-02-01) and Planned Development Rezoning (PDC04-031). SCH#2004072110. Volume I through V. Approved as Final: June 6.

City of San Jose, California. 2005b. First Amendment to the Draft Environmental Impact Report. Hitachi Campus and Mixed-Use Transit Village Project. General Plan Amendment (GP04-02-01) and Planned Development Rezoning (PDC04-031). SCH#2004072110. Volume I through V. Approved as Final: June 6.

ENVIRON International Corporation (ENVIRON). 2005. *Draft Current Conditions Report, Hitachi Global Technologies, Inc., Redevelopment Area and Endicott Boulevard/Tucson Way, 5600 Cottle Road, San Jose, California.* July.

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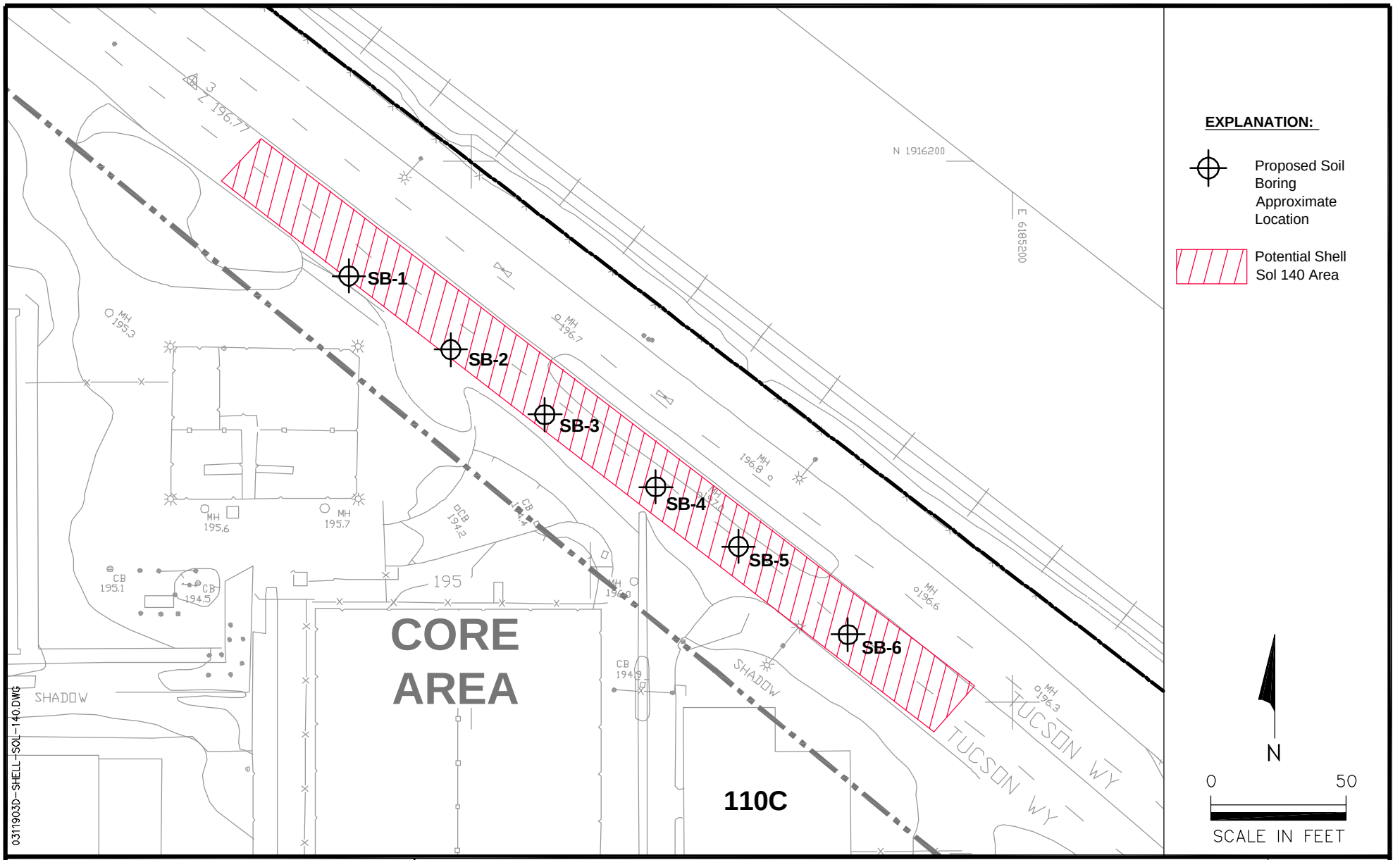
TABLES

Table VII.1
Sample Identification Table
Hitachi GST
San Jose, California

Sample Location ID	Area	Location	Sample Top Depth (ft bgs)	Sampling Consituent	USEPA Analysis Method Number
SB-1	Roadway	Tuscon Way, near Building 110	5	kerosene and diesel	8015M
SB-1	Roadway	Tuscon Way, near Building 110	10	kerosene and diesel	8015M
SB-1	Roadway	Tuscon Way, near Building 110	15	kerosene and diesel	8015M
SB-1	Roadway	Tuscon Way, near Building 110	20	kerosene and diesel	8015M
SB-1	Roadway	Tuscon Way, near Building 110	25	kerosene and diesel	8015M
SB-2	Roadway	Tuscon Way, near Building 110	5	kerosene and diesel	8015M
SB-2	Roadway	Tuscon Way, near Building 110	10	kerosene and diesel	8015M
SB-2	Roadway	Tuscon Way, near Building 110	15	kerosene and diesel	8015M
SB-2	Roadway	Tuscon Way, near Building 110	20	kerosene and diesel	8015M
SB-2	Roadway	Tuscon Way, near Building 110	25	kerosene and diesel	8015M
SB-3	Roadway	Tuscon Way, near Building 110	5	kerosene and diesel	8015M
SB-3	Roadway	Tuscon Way, near Building 110	10	kerosene and diesel	8015M
SB-3	Roadway	Tuscon Way, near Building 110	15	kerosene and diesel	8015M
SB-3	Roadway	Tuscon Way, near Building 110	20	kerosene and diesel	8015M
SB-3	Roadway	Tuscon Way, near Building 110	25	kerosene and diesel	8015M
SB-4	Roadway	Tuscon Way, near Building 110	5	kerosene and diesel	8015M
SB-4	Roadway	Tuscon Way, near Building 110	10	kerosene and diesel	8015M
SB-4	Roadway	Tuscon Way, near Building 110	15	kerosene and diesel	8015M
SB-4	Roadway	Tuscon Way, near Building 110	20	kerosene and diesel	8015M
SB-4	Roadway	Tuscon Way, near Building 110	25	kerosene and diesel	8015M
SB-5	Roadway	Tuscon Way, near Building 110	5	kerosene and diesel	8015M
SB-5	Roadway	Tuscon Way, near Building 110	10	kerosene and diesel	8015M
SB-5	Roadway	Tuscon Way, near Building 110	15	kerosene and diesel	8015M
SB-5	Roadway	Tuscon Way, near Building 110	20	kerosene and diesel	8015M
SB-5	Roadway	Tuscon Way, near Building 110	25	kerosene and diesel	8015M
SB-6	Roadway	Tuscon Way, near Building 110	5	kerosene and diesel	8015M
SB-6	Roadway	Tuscon Way, near Building 110	10	kerosene and diesel	8015M
SB-6	Roadway	Tuscon Way, near Building 110	15	kerosene and diesel	8015M
SB-6	Roadway	Tuscon Way, near Building 110	20	kerosene and diesel	8015M
SB-6	Roadway	Tuscon Way, near Building 110	25	kerosene and diesel	8015M

Notes:
ft = feet
bgs = below ground surface
USEPA = United States Environmental Protection Agency
Refer to Figure VII.1 for Sample Locations.
Sample depths may vary depending on whether contamination is observed.

FIGURES



ENVIRON

Proposed Soil Boring Locations in Potential Shell Sol 140 Area beneath Tucson Way
Hitachi GST
San Jose, California

Figure
VII.1

Drafter: RS | Date: 6/23/05 | Contract Number: 03-11903E | Approved: | Revised:

ATTACHMENT VIII
SOIL INSPECTION/SAMPLING PLAN
FOR OTHER REMAINING AREAS

Original: March 17, 2006
Revision 1: April 19, 2006

ATTACHMENT VIII
SOIL INSPECTION/SAMPLING PLAN
FOR OTHER REMAINING AREAS

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ACRONYMS

AST	Above-ground Storage Tank
CCR	Current Conditions Report
COC	Chain-of-Custody
DJPA	David J. Powers & Associates
DHS	Department of Health Services
DI	Deionized
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FRP	Fiberglass Reinforced Plastic
GPA	General Plan Amendment
GST	Global Storage Technologies
HF	Hydrofluoric
HHRA	Human Health Risk Assessment
HLA	Harding Lawson Associates
IBM	International Business Machines
IDW	Investigation Derived Waste
IT	International Technology Corporation
NMP	N-Methyl-2-Pyrrolidone
OVM	Organic Vapor Monitor
PAH	Polycyclic Aromatic Hydrocarbons
PCE	Tetrachloroethene
PD	Planned Development
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RBTC	Risk-Based Target Concentration
RCRA	Resource Conservation and Recovery Act
STL	Severn Trent Laboratories
STLC	Soluble Threshold Limit Concentration
TCA	Trichloroethane
TCE	Trichloroethene
TPH	Total Petroleum Hydrocarbons
TTLC	Total Threshold Limit Concentration
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
WV	Waste Vault

ACRONYMS continued

kg	kilogram
µg	microgram
mg	milligram

ATTACHMENT VIII
SOIL INSPECTION/SAMPLING PLAN
FOR OTHER REMAINING AREAS

VIII.1 Overview

Recently, David J. Powers & Associates (DJPA) prepared an Environmental Impact Report (EIR) for the proposed General Plan Amendment (GPA) and Planned Development (PD) Zoning on the approximately 332-acre Hitachi Global Storage Technologies, Inc. (Hitachi GST) property located at 5600 Cottle Road, San Jose, California ("the Site"). The City of San Jose Planning Commission certified the Final EIR on June 6, 2005 (City of San Jose 2005a, 2005b). As part of the EIR, ENVIRON International Corporation (ENVIRON) prepared a screening human health risk assessment (Screening HHRA) to evaluate the potential impacts on human health for Parcels O-1 through O-5, termed the Redevelopment Area (approximately 131 acres). In addition, ENVIRON prepared a Current Conditions Report (CCR) (ENVIRON 2005) for these same parcels.

The purpose of this Soil Inspection/Sampling Plan is to address the following areas identified in the Screening HHRA/CCR as needing additional evaluation/investigation of soil:

- A limited number of soil samples should be collected in the area beneath the Building 010 emergency generator concrete pad to confirm that any residual diesel fuel concentrations are below risk-based target concentrations (RBTCs) developed for the Site.

- After Building 026 demolition, an environmental engineer should inspect the former waste mixed solvent storage area within former waste vault (WV) 15, which contained one 250-gallon aboveground storage tank (AST) (tank T-1). If any indications of leaking are present (odors, visual staining), soil sampling should be conducted.

- Sampling for volatile organic compounds (VOCs), total chromium, nickel, and possibly other metals beneath the former Chemical Storage Room in the vicinity of the cast iron pipe.

- Harding Lawson Associates (HLA) previously recommended that when the linoleum in Room 400 of Building 026 is removed, the concrete floor be inspected for loss of integrity, including cracking, crumbling, staining, and possible routes for liquid migration. ENVIRON recommends that this inspection be performed. If any indications of leaking are present (odors, visual staining), soil sampling should be conducted.

- An out-of-use buried concrete trench, that formerly contained pipes which were connected to former waste vaults and tanks, is located west of Building 026 and runs in a north-south direction along the entire length of Parcel O-2. Given the history of this trench, ENVIRON recommends that an environmental engineer should inspect the area surrounding the concrete trench after it is removed as part of redevelopment activities. If any indications of leaking are present (cracking, visual staining), soil sampling should be conducted.

- Because the location of the possible former buried pipeline located north of Building 026 is unknown, collecting confirmatory soil samples in the vicinity of the possible former buried pipeline is not possible. Therefore, ENVIRON recommends that if any indications of a historic release (visual staining, odor) are identified during Site redevelopment/grading activities, soil sampling should be conducted. This will be addressed in the Soil Management Plan for the Site.

- An environmental engineer should inspect the Building 051 Cooling Tower area, including formerly designated WV-11 and former associated pipeline areas during demolition activities. If any indications of leaking are present (cracking, visual staining), soil sampling should be conducted.

In addition, the following was identified in the Soil Inspection/Sampling Plan:

- A former industrial wastewater sump is located in the basement of Building 028 and has since been filled with concrete and is no longer in use. Once removed, an environmental engineer should inspect the area surrounding the sump in building 028. If any indications of leaking are present (visual staining, odor), soil sampling should be conducted.

The results of this Soil Inspection/Sampling Plan will be used to determine if any mitigation/remediation measures are needed at the Site due to the areas identified above.

VIII.2 History

The following history for each of the other remaining areas was taken from the Screening HHRA/CCR. In addition, ENVIRON conducted a Site visit as part the Phase I Environmental Site Assessments (ESAs) prepared by ENVIRON in 2003 and 2004.

- Emergency Diesel Generator at Building 010. A soil investigation was conducted in December 1988 through February 1989 adjacent to the diesel fuel emergency generator associated with Building 010. According to the soil investigation report, International Business Machines (IBM) personnel noticed staining on the concrete pad beneath the generator. This investigation was conducted to evaluate whether diesel fuel may have migrated through the concrete and into the underlying soil. On December 15, 1988, a boring was advanced to a total depth of nine feet below the concrete surface, and four soil samples were collected at different depths and analyzed for total petroleum hydrocarbons as diesel (TPH-diesel). TPH-diesel was detected in all four samples ranging from 190 to 220 milligrams per kilogram (mg/kg). Based on these results, on February 3, 1989, four additional soil borings were advanced in this area and soil samples were collected. TPH-diesel was not detected (<10 mg/kg) in any of these samples. Additional borings were attempted on the northern side of the Building 010 generator; however, the borings could not be advanced because polyvinyl chloride (PVC) pipes were encountered directly beneath the concrete pad. According to the soil investigation report, a strong diesel odor was noticed below the core holes where these borings were attempted. Based on these results, HLA recommended that the soil beneath the Building 010 emergency generator concrete pad be excavated to a depth of 10 feet, and confirmatory soil samples be collected from the walls and floor of the excavation to confirm that soil concentrations of diesel fuel are below 10 mg/kg. No information was found in the documentation received to confirm that the excavation and confirmation sampling was conducted.

- Former WV-15 in Building 026. WV-15 consisted of a large enclosed area on the western side of Building 026, comprising five sections: 1) a waste mixed solvent storage area containing one 250-gallon aboveground storage tank (T-1) and a sump; 2) a diesel generator; 3) a de-ionizing (DI) water area containing a 10,000-gallon DI water tank (T-6) and twelve smaller DI water storage tanks; 4) a waste treatment area containing a 1,200-gallon hydrofluoric (HF) acid neutralization tank (P-1); and 5) an industrial waste storage area containing four aboveground 2,000-gallon fiberglass reinforced plastic (FRP) tanks (T-2, T-3, T-4, and T-5) for the collection of concentrated and diluted heavy metal and brine industrial waste. Tank P-1 within WV-15 was formerly a permitted Resource Conservation and Recovery Act (RCRA)

unit. (It is unknown whether the other tanks within WV-15 were formerly permitted RCRA units). Solvent wastes were formerly collected and transferred off-site. Brine and heavy metal waste streams were formerly transferred via underground pipelines within concrete trenches to the on-site wastewater treatment plant (Building 110) on the Core Area.

In September 1985, a soil investigation was conducted to evaluate whether chemicals had migrated into soils beneath the concrete vault associated with the HF acid neutralization tank (P-1) within WV-15. Soil samples from three soil borings up to 12 feet bgs were analyzed for pH, fluoride, and total chromium. Sampling results indicated that pH ranged from 6.0 to 7.0; fluoride ranged from 0.2 to 0.4 mg/kg; and total chromium ranged from 49 to 77 mg/kg. Based on these concentrations, HLA concluded that these chemicals had not migrated into underlying soils.

Pursuant to IBM's Closure Plan associated with the Site's RCRA Part B permit, tanks T-1, T-2, T-3, and T-4 were closed in August 1993 and tank T-5 was closed in February 1994. According to the closure reports dated August 1993 and February 1994, respectively, all five tanks were drained, cleaned, and properly disposed. No soil sampling was conducted as part of closure activities. Hitachi GST personnel were unaware of when tank T-6 (DI water tank) was removed. Hitachi GST personnel reported that all tanks, sumps, and associated piping have been removed from WV-15.

HF acid wastewater was formerly collected in tank P-1 in WV-15 and neutralized under IBM's RCRA Part B permit. As a result of a Department of Health Services (DHS) inspection of the IBM facility on July 27, 1989, DHS identified several hazardous waste violations at the facility, including the improper notification and closure of tank P-1. On January 29, 1990, the DHS and IBM signed a Corrective Action Order and Complaint for Penalty (Docket HWCA 89/90-029), which ordered IBM to submit a certification that the HF acid neutralization tank was closed in accordance with the approved Closure Plan. IBM submitted a "Waste Hydrofluoric Acid Storage Tank Closure Report" prepared by International Technology Corporation (IT) dated March 5, 1990 to the DHS. The closure report indicated that tank P-1 was properly closed in April/May 1988. In July 1988, a soil investigation was conducted beneath the tank P-1 vault. Two cores were drilled through the floor of the concrete vault that contained Tank P-1, one at the fill end of the tank and the other beneath the vault sump. Two soil samples, designated as IBM-1 and IBM-2, were collected from native soils and analyzed for pH, fluoride, and metals. The pH of the two samples was 8.0 and 8.1. Concentrations of three metals (copper, lead, and nickel) exceeded the Soluble Threshold Limit Concentration (STLC). None of the

metal concentrations exceeded the Total Threshold Limit Concentration (TTLC). Chromium was detected up to 46 mg/kg; copper was detected up to 36 mg/kg; lead was detected up to 11 mg/kg; and nickel was detected up to 88 mg/kg. The closure report indicates that no further action was required. Based on IBM's submittals, the DHS stated in a letter dated July 30, 1990, that the HF acid tank is officially closed.

- Investigation of Soil Conditions Beneath Building 026 – Former Chemical Storage Room. An investigation of soil conditions beneath Building 026 was conducted in July 1987. The investigation was performed in Rooms 103, 104, 105, 106, 110, 112, 402, 403, 404, 405, and the Chemical Storage Room. These rooms were part of pilot-scale product development and were used for several purposes, including plating, soldering, etching, and chemical storage. This investigation was conducted to evaluate whether chemicals used in the rooms have migrated through the concrete floor into the underlying soils. Initially nineteen soil borings were drilled inside Building 026 and one boring was drilled outside at the southeastern corner of the building as a background location. Two soil samples were collected from most borings. All samples were from fill or from pipe trench backfill beneath the building. The first sample from each boring was collected directly beneath the concrete slab, which ranged from six to 12 inches thick. A second sample was collected from two to four feet below the concrete slab. The shallow sample from each boring was analyzed and the lower sample was held for possible analysis at a later date. The samples were analyzed for different constituents, including trichloroethene (TCE), Freon 113, trichloroethane (TCA), n-methyl-2-pyrrolidone (NMP), chromium, copper, nickel, lead, arsenic, tin, fluoride, nitrate, sulfate, chloride, and pH.

  Notably, chromium was detected up to 240 mg/kg; lead was detected up to 95 mg/kg; and nickel was detected up to 270 mg/kg. In addition, TCE was detected at 15 micrograms per kilogram (μg/kg) and at 50 μg/kg in two borings located in the Chemical Storage Room. Therefore, the deeper sample from each of these two borings was analyzed for TCE, although the holding time for analysis had been exceeded. TCE was detected at 200 μg/kg in one of the deeper samples and was not detected (<10 μg/kg) in the other deeper sample. Due to the elevated detections of TCE in the Chemical Storage Room, six additional borings were advanced in the Chemical Storage Room and loading dock area in September and October 1987. Soil samples were collected and analyzed for TCE and pH. TCE was detected in four of the samples up to 230 μg/kg. HLA recommended excavation of any TCE-containing soils (above 500 μg/kg) within the Chemical Storage Room. HLA estimated that up to 23 cubic yards of soil should be removed from the trench backfill beneath the Chemical Storage Room on either side of the cast iron pipe that was formerly used to transfer wastewater to WV-02 (original) and WV-02 (second). ENVIRON has not

been provided with information that any soil has been remediated in the Chemical Storage Room.

- Liquid Seepage in Room 400 of Building 026. A soil investigation was conducted in February 1987 in Room 400 of Building 026. According to the soil investigation report, liquid had periodically migrated upward through the concrete floor and accumulated between the linoleum and concrete in this room for several years. This investigation was conducted to evaluate the possible source areas of the liquid observed on the floor in Room 400 and to evaluate whether the liquid contained organic chemicals. At the time of the investigation, the room had been abandoned. According to the soil investigation report, the liquid appeared to be mostly oil. On February 19, 1987, eight borings, which were randomly spaced throughout the room, were drilled through the concrete floor to a maximum depth of 2.5 feet. Three samples (one from concrete and two from fill material) were collected from each boring and analyzed for TCE, Freon 113, TCA, tetrachloroethene (PCE), total chromium, hexavalent chromium, copper, nickel, fluoride, nitrate and pH. TCE was detected in three samples at a depth of 0.5 feet bgs up to 7.0 μg/kg. TCE was not detected (<1 μg/kg) in the remaining samples. Freon 113, TCA, and PCE were not detected (<1 μg/kg) in any of the samples. Chromium was detected up to 60 mg/kg; copper was detected up to 140 mg/kg; and nickel was detected up to 130 mg/kg. Hexavalent chromium was not detected (<1 mg/kg) in any of the samples. Fluoride was also not detected (<2 mg/kg) in any of the samples. Nitrate was detected up to 20 mg/kg, and pH ranged from 7.3 to 13.0.

  According to the soil investigation report, these results do not indicate a source area for the observed surface liquid seeps, and HLA concluded that additional soil sampling was not necessary at that time. The soil investigation report does recommend that when the linoleum in the room is removed, the concrete floor be inspected for loss of integrity, including cracking, crumbling, staining, and possible routes for liquid migration.

- Former Buried Concrete Trench. An out-of-use buried concrete trench is located west of Building 26 and runs in a north-south direction along the entire length of Parcel O-2. The concrete trench formerly contained pipes that transferred wastewater (e.g., industrial wastewater and heavy metals wastewater) from waste vaults at the Site. No soil investigation involving the removal of these pipes was identified.

- Possible Former Buried Pipeline. One soil investigation was conducted north of Building 026; however, IBM and their environmental consultant (MACTEC) personnel were unsure why this soil investigation was conducted. Based on the

locations of the soil borings, it appears that this investigation was conducted as part of a pipeline removal. At least sixteen soil borings were advanced. A soil investigation report for these soil borings has not been located in IBM or MACTEC files.

- Former Industrial Wastewater Sump at Building 028. Industrial wastewater from various laboratories were previously collected in a sump in the basement of Building 028. Wastes from the sump were pumped overhead to a pipeline leading to Building 110. The sump does not appear to be a current or former RCRA permitted unit. No reports are available documenting completion of soil investigation beneath the sump. The sump appears to have been abandoned in-place by filling with concrete.

- WV-11 and Associated Pipeline at Building 051. Blow down from the Building 051 cooling tower was formerly collected in a tank (WV-11) and discharged to the on-site wastewater treatment plant (Building 110) in the Core Area as industrial wastewater. According to Hitachi GST personnel, WV-11 was a former RCRA-permitted unit. In 1994, the piping from WV-11 to Building 110 was removed consistent with IBM's Closure Plan and WV-11 was connected to the sanitary sewer. Notification of this pipeline closure was submitted to the Department of Toxic Substances Control (DTSC) in a letter from IBM dated September 26, 1994.

All areas identified above for evaluation/investigation are shown on Figure VIII.1.

VIII.3 Project Planning

Soil sampling beneath the Building 010 emergency generator concrete pad will be conducted after the generator is taken out of service. It is anticipated that the generator will be taken out of service in late 2006.

An environmental engineer will be present on-site during Site redevelopment/grading activities north of Building 026 in the vicinity of the possible former buried pipeline, west of Building 026 in the vicinity of the former buried concrete trench, and during the demolition of former WV-15 at Building 026; the former chemical storage room in Building 026; Room 400 in Building 026; and the Building 051 Cooling Tower/WV-11. As this requires building demolition and the excavation and grading of soil in the vicinity of the buildings, the inspection/sampling is planned to proceed according to the tentative demolition plan. Meaning these areas will be inspected in late 2006, early 2007. At this time sampling will be conducted beneath the Former Chemical Storage Room in the vicinity of the cast iron pipe. In addition, if any indications of a historic release (visual staining, odor) are identified in the other areas inspected, then potentially affected soils will also be sampled according to the sampling plan described in Section VIII.4.

VIII.4 Implementation of Soil Sampling

Prior to initiating field activities, ENVIRON will conduct a survey of underground utilities at proposed sampling locations, arrange for drilling and analytical laboratory subcontractors, and update the Site-specific health and safety plan.

B010 Emergency Generator

Three soil borings will be advanced in the area of the B010 Emergency Generator to a depth 20 feet bgs for the collection of soil samples using a truck-mounted GeoProbe direct-push rig. Proposed sampling locations are summarized on Table VIII.1 and shown on Figure VIII.2. In order to gain access, the generator must first be placed out of service. Samples will be collected at nominal five-foot intervals or when evidence of contaminated soils is present. In addition, soils will be field screened for VOCs during drilling activities using an Organic Vapor Monitor (OVM) and additional samples may be added based on the results of this monitoring.

Samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to Severn Trent Laboratories (STL), a California State-certified analytical laboratory. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under chain-of-custody (COC) protocol for analysis for TPH-Diesel by the United States Environmental Protection Agency (USEPA) Method 3510/8015M. If TPH-Diesel is detected, further analysis for polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270SIM will be conducted.

Former WV-15 at Building 026

After Building 026 demolition, an environmental engineer will inspect the former waste mixed solvent storage area within former WV-15, which contained one 250-gallon AST (tank T-1). If the presence of soil contamination is suspected, then limited soil sampling will be conducted using either a truck-mounted direct-push drill rig or hand-hammered ARTS-brand sampling device depending on the suspected depth of contamination.

Samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample

analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471, VOCs by USEPA Method 8260B, and pH by USEPA Method 9045. Based on the results of the VOC analyses, ENVIRON will work with DTSC to determine the appropriate soil gas sampling strategy.

Former Chemical Storage Room Building 026

After Building 026 demolition, three soil borings will be advanced in the area below the concrete floor and in the vicinity of the cast iron pipe located below the Former Chemical Storage Room. Borings will be advanced to a depth of 20 feet bgs for the collection of soil samples using a truck-mounted GeoProbe direct-push rig. Proposed sampling locations are summarized on Table VIII.2. Samples will be collected at nominal five-foot intervals or when evidence of contaminated soils is present. In addition, soils will be field screened for VOCs during drilling activities using an OVM and additional samples may be added based on the results of this monitoring.

Samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471, VOCs by USEPA Method 8260B, and hexavalent chromium by USEPA Method 7196. Based on the results of the VOC analyses, ENVIRON will work with DTSC to determine the appropriate soil gas sampling strategy.

Room 400 Building 026

When the carpet and/or linoleum in Room 400 of Building 026 is removed, an environmental engineer will inspect the concrete floor in the room for loss of integrity, including cracking, crumbling, staining, and possible routes for liquid migrations. If any indicates of leaking are present, then limited soil sampling will be conducted. This would consist of three soil borings advanced to a depth of 10 feet using a limited-access GeoProbe direct-push rig. Samples will be collected at nominal five-foot intervals or when evidence of contaminated soils is present. In addition, soils will be field screened for VOCs during drilling activities using an OVM and additional samples may be added based on the results of this monitoring.

Samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471, VOCs by USEPA Method 8260B and full range analysis of TPH to determine what fraction is present. If TPH is detected, further analysis for PAHs by USEPA Method 8270SIM will be conducted. Based on the results of the VOC analyses, ENVIRON will work with DTSC to determine the appropriate soil gas sampling strategy.

Former Buried Concrete Trench

During the removal of the buried concrete trench west of Building 026, an environmental engineer will observe the conditions of the soils in the vicinity of the former concrete trench. If the presence of soil contamination is suspected, then limited soil sampling will be conducted using either a truck-mounted direct-push drill rig or hand-hammered ARTS-brand sampling device depending on the suspected depth of contamination. Soil samples will be field-screened for VOCs during drilling activities using an OVM.

If sampling is necessary, samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471 and for pH by USEPA Method 9045. If VOCs are present based on field screening, additional samples and corresponding VOC analyses by USEPA Method 8260B may be added.

Possible Former Buried Pipeline North of Building 026

During excavation/grading of soil north of Building 026, an environmental engineer will observe the conditions of the soils in the vicinity of the possible former buried pipeline. If the presence of soil contamination is suspected, then limited soil sampling will be conducted using either a truck-mounted direct-push drill rig or hand-hammered ARTS-brand sampling device depending on the suspected depth of contamination.

If sampling is necessary, samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic

bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471 and pH by USEPA Method 9045.

Former Industrial Wastewater Sump at Building 028

During demolition Building 028, an environmental engineer will observe the conditions of the soils, specifically in the area of the former industrial wastewater sump. If the presence of soil contamination is suspected, then limited soil sampling will be conducted using either a truck-mounted direct-push drill rig or hand-hammered ARTS-brand sampling device depending on the suspected depth of contamination.

If sampling is necessary, samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471 and pH by USEPA Method 9045.

WV-11 and Former Associated Pipeline

During demolition of the Cooling Tower at Building 051, an environmental engineer will observe the conditions of the soils, specifically in the area of the formerly designated WV-11 and associated pipeline areas. If the presence of soil contamination is suspected, then limited soil sampling will be conducted using either a truck-mounted direct-push drill rig or hand-hammered ARTS-brand sampling device depending on the suspected depth of contamination.

Samples will be collected in either stainless steel or acetate sleeves, capped with Teflon™-lined caps, placed in Ziploc™-type plastic bags, and stored on ice in a cooler. Samples will be submitted to STL. If STL is not available for the sample analyses, another California State-certified analytical laboratory will be retained. All samples will be submitted under COC protocol for analysis for analysis for CAM 17 Metals by USEPA Method 6010B and 7470/7471 and pH by USEPA Method 9045.

At the end of each sampling day, sample information will be written on COC forms. Information entered onto the form includes the sample identification number, sample

matrix, date of sample collection, location and depth of sample, and requested analyses. Each COC form will consist of three carbon copy sheets, two of which will be placed in the appropriate sample shipping cooler for laboratory use, with the third sheet being retained by the Field Manager. COC forms will be placed in adhesive plastic windows and affixed to the inside of the shipping cooler lid. Coolers will then be closed, sealed with duct tape, and custody seals affixed to each cooler to enable detection of tampering.

All sampling equipment will be decontaminated using Liquinox solution with a DI water rinse between each use to minimize the potential for cross contamination. In addition, one equipment blank quality assurance/quality control (QA/QC) sample will be collected for each day of sampling. After completion of sampling activities, the borings will be grouted and the surface completed to match native materials.

Investigation derived waste (IDW) will be collected in appropriate containers that will be labeled and sealed following completion of field activities. Management and disposal of IDW will be the responsibility of Hitachi GST. ENVIRON will provide Hitachi GST with the relevant analytical results to assist Hitachi GST with appropriate management and disposal of IDW.

VIII.5 Data Management and Reporting

Upon receipt of the analytical results, ENVIRON will prepare a summary table of the data and compare the results to the RBTCs previously developed for the Site in the Screening HHRA/CCR. Based on this evaluation, a recommendation will be made for no further action, further investigation, and/or remediation. The results of this evaluation will be summarized in a short letter report (plus tables and figures) to be submitted to DTSC.

VIII.6 Project Schedule

As discussed above, the inspections and sampling will proceed according to the demolition schedule.

VIII.7 References

City of San Jose, California. 2005a. Draft Environmental Impact Report. Hitachi Campus and Mixed-Use Transit Village Project. General Plan Amendment (GP04-02-01) and Planned Development Rezoning (PDC04-031). SCH#2004072110. Volume I through V. Approved as Final: June 6.

City of San Jose, California. 2005b. First Amendment to the Draft Environmental Impact Report. Hitachi Campus and Mixed-Use Transit Village Project. General Plan Amendment (GP04-02-01) and Planned Development Rezoning (PDC04-031). SCH#2004072110. Volume I through V. Approved as Final: June 6.

ENVIRON International Corporation (ENVIRON). 2005. *Draft Current Conditions Report, Hitachi Global Technologies, Inc., Redevelopment Area and Endicott Boulevard/Tucson Way, 5600 Cottle Road, San Jose, California.* July.

TABLES

TABLE VIII.1
Sample Identification Table - Emergency Generator at Building 010
Hitachi GST
San Jose, California

Sample Location ID	Parcel	Sample Type	Area	Location	Corresponding Figure	Sample Top Depth (ft bgs)	Sampling Consituent	USEPA Analysis Method Number
B010-B1-1	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	5	TPH - Diesel	3510/8015M
B010-B1-2	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	10	TPH - Diesel	3510/8015M
B010-B1-3	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	15	TPH - Diesel	3510/8015M
B010-B1-4	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	20	TPH - Diesel	3510/8015M
B010-B2-1	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	5	TPH - Diesel	3510/8015M
B010-B2-2	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	10	TPH - Diesel	3510/8015M
B010-B2-3	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	15	TPH - Diesel	3510/8015M
B010-B2-4	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	20	TPH - Diesel	3510/8015M
B010-B3-1	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	5	TPH - Diesel	3510/8015M
B010-B3-2	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	10	TPH - Diesel	3510/8015M
B010-B3-3	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	15	TPH - Diesel	3510/8015M
B010-B3-4	O-2	Soil	Near Building 010 Emergency Generator	Building 010	Figure VIII.2	20	TPH - Diesel	3510/8015M

Notes:
bgs = below ground surface
ft = feet
TPH = Total Petroleum Hydrocarbons
USEPA = United States Environmental Protection Agency

TABLE VIII.2
Sample Identification Table - Former Chemical Storage Room
Hitachi GST
San Jose, California

Sample Location ID	Parcel	Sample Type	Area	Location	Corresponding Figure	Sample Top Depth (ft bgs)	Sampling Consituent	USEPA Analysis Method Number
B026-B1-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	Metals	6010B and 7470/7471
B026-B1-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	VOCs	8260B
B026-B1-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	Hexavalent Chromium	7196
B026-B1-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	Metals	6010B and 7470/7471
B026-B1-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	VOCs	8260B
B026-B1-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	Hexavalent Chromium	7196
B026-B1-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	Metals	6010B and 7470/7471
B026-B1-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	VOCs	8260B
B026-B1-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	Hexavalent Chromium	7196
B026-B1-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	Metals	6010B and 7470/7471
B026-B1-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	VOCs	8260B
B026-B1-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	Hexavalent Chromium	7196
B026-B2-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	Metals	6010B and 7470/7471
B026-B2-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	VOCs	8260B
B026-B2-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	Hexavalent Chromium	7196
B026-B2-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	Metals	6010B and 7470/7471
B026-B2-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	VOCs	8260B
B026-B2-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	Hexavalent Chromium	7196

TABLE VIII.2
Sample Identification Table - Former Chemical Storage Room
Hitachi GST
San Jose, California

Sample Location ID	Parcel	Sample Type	Area	Location	Corresponding Figure	Sample Top Depth (ft bgs)	Sampling Consituent	USEPA Analysis Method Number
B026-B2-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	Metals	6010B and 7470/7471
B026-B2-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	VOCs	8260B
B026-B2-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	Hexavalent Chromium	7196
B026-B2-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	Metals	6010B and 7470/7471
B026-B2-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	VOCs	8260B
B026-B2-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	Hexavalent Chromium	7196
B026-B3-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	Metals	6010B and 7470/7471
B026-B3-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	VOCs	8260B
B026-B3-1	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	5	Hexavalent Chromium	7196
B026-B3-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	Metals	6010B and 7470/7471
B026-B3-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	VOCs	8260B
B026-B3-2	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	10	Hexavalent Chromium	7196
B026-B3-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	Metals	6010B and 7470/7471
B026-B3-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	VOCs	8260B
B026-B3-3	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	15	Hexavalent Chromium	7196
B026-B3-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	Metals	6010B and 7470/7471
B026-B3-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	VOCs	8260B
B026-B3-4	O-2	Soil	Beneath Former Chemical Storage Room in Building 026	Building 026	No Figure - sampling locations to be determined in field	20	Hexavalent Chromium	7196

Notes:
bgs = below ground surface
ft = feet
USEPA = United States Environmental Protection Agency
VOCs = Volatile Organic Compounds

FIGURES

Legend

- Previous Soil Boring Approximate Location (ENVIRON does not have analytical data)
- Parking Lot
- Building
- Orchard
- Landscaped Area
- Roadways in the Redevelopment Area
- Outline of Redevelopment Area
- Outline of PG&E Electrical Substation
- Outline of Parcel O-6
- Outline of Core Area
- lake

N

1,000 500 0 Feet

ENVIRON

Locations of Other Remaining Areas to be Evaluated/Investigated

Hitachi GST
San Jose, California

Date:	Contract Number:		Figure
5/19/05	03-11903E		VIII.1
Drafter: RS	Approved:	Revised:	

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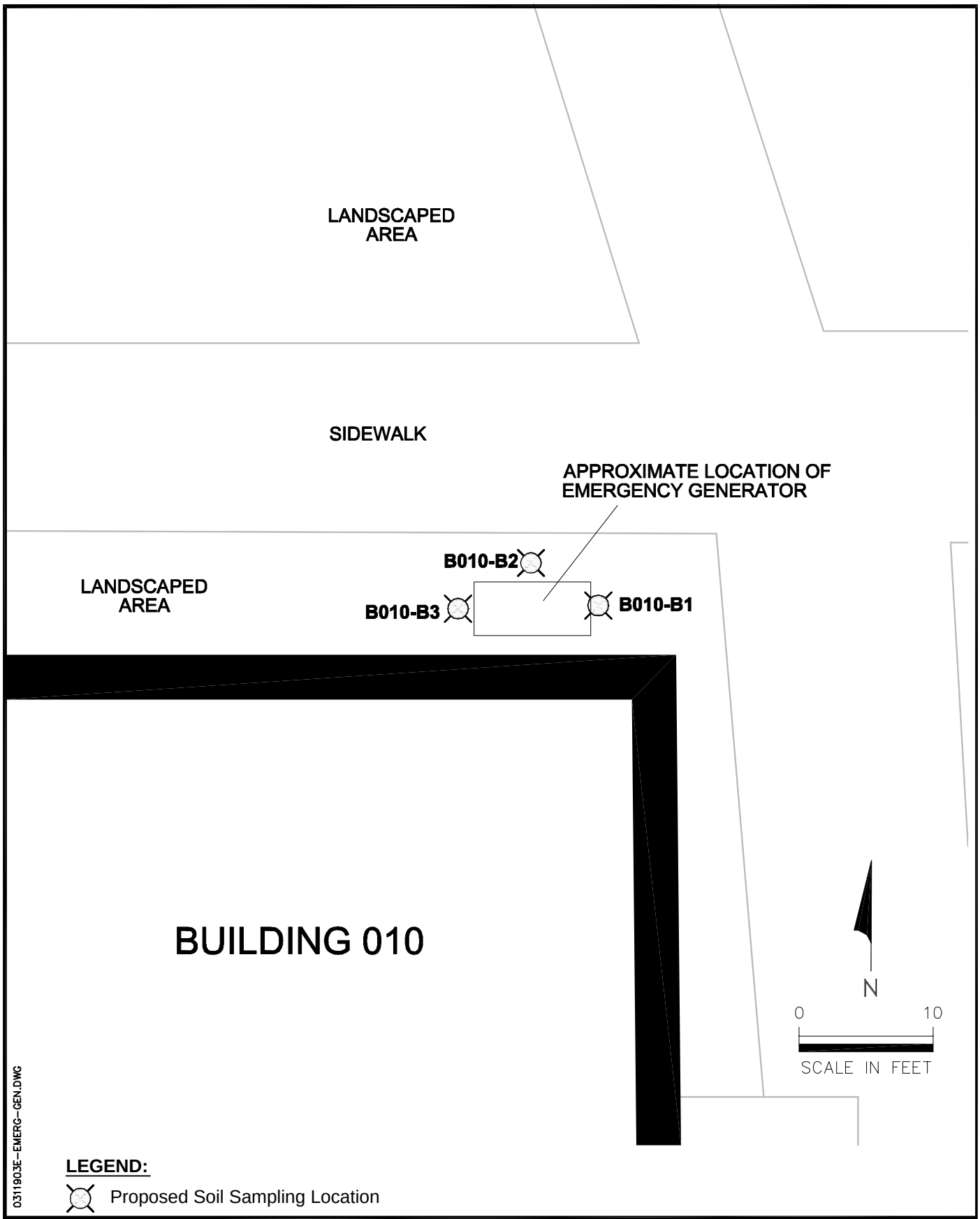


0311903E-EMERG-GEN.DWG

ENVIRON

Proposed Soil Sampling Locations for Emergency Generator at Building 010
Hitachi GST
San Jose, California

Figure
VIII.2

Drafter: RS | Date: 1/31/06 | Contract Number: 03-11903E | Approved: | Revised:

ATTACHMENT IX
SOIL INSPECTION/SAMPLING PLAN
SOIL GAS EVALUATION FOR PARCELS O-1 AND O-2

March 10, 2006

ATTACHMENT IX
SOIL INSPECTION/SAMPLING PLAN
SOIL GAS EVALUATION FOR PARCELS O-1 AND O-2

TABLE OF CONTENTS

TABLES

FIGURES

ACRONYMS

bgs	below ground surface
Cal/EPA	California Environmental Protection Agency
CCR	Current Conditions Report
COC	Chain-of-Custody
DCE	Dichloroethene
DJPA	David J. Powers & Associates
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
GPA	General Plan Amendment
GST	Global Storage Technologies
HHRA	Human Health Risk Assessment
IBM	International Business Machines
IDW	Investigation Derived Waste
OD	Outer Diameter
PD	Planned Development
RBTC	Risk-Based Target Concentration
RWQCB-SF	Regional Water Quality Control Board, San Francisco Bay Region
TCA	Trichloroethane
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

µg	microgram
L	liter
min	minute
ml	milliliter

ATTACHMENT IX
SOIL INSPECTION/SAMPLING PLAN
SOIL GAS EVALUATION FOR PARCELS O-1 AND O-2

IX.1 Overview

Recently, David J. Powers & Associates (DJPA) prepared an Environmental Impact Report (EIR) for the proposed General Plan Amendment (GPA) and Planned Development (PD) Zoning on the approximately 332-acre Hitachi Global Storage Technologies, Inc. (Hitachi GST) property located at 5600 Cottle Road, San Jose, California ("the Site"). The City of San Jose Planning Commission certified the Final EIR on June 6, 2005 (City of San Jose 2005a, 2005b). As part of the EIR, ENVIRON International Corporation (ENVIRON) prepared a screening human health risk assessment (Screening HHRA) to evaluate the potential impacts on human health for Parcels O-1 through O-5, termed the Redevelopment Area (approximately 131 acres). In addition, ENVIRON prepared a Draft Current Conditions Report (CCR) (ENVIRON 2005) for these same parcels plus Endicott Boulevard/Tucson Way on the northeast side of the Site. These areas are shown on Figure IX.1.

As discussed in the Screening HHRA/Draft CCR, extensive investigation/remediation has been conducted at the Site for groundwater. The Screening HHRA/Draft CCR for the Site did not identify any additional data needs for this media. However, at the request of the Department of Toxic Substances Control (DTSC), further soil gas investigation will be conducted to determine if a potential local volatile organic compound (VOC) source area exists near Well A-30.

IX.2 History

In the early 1980s, chlorinated hydrocarbons were detected in soil beneath an on-site underground tank farm. Site-wide investigations showed that volatile organic compounds VOCs, primarily Freon 113, trichloroethylene (TCE), 1,1,1-trichloroethane (1,1,1-TCA) and 1,1-dichloroethene (1,1-DCE) were present in groundwater beneath and downgradient of the Site. Subsequently, the Site has undergone extensive remedial action including the remediation of solvent-impacted soil and extraction and treatment of on-site and off-site groundwater. Under an order from the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB-SF) (Order No. R2-2002-0082 – Final Site Cleanup Requirements), International Business Machines (IBM) is obligated to remediate the groundwater (RWQCB-SF 2002). According to Hitachi GST, on-site groundwater remedial actions are expected to continue for at least 10 years.

Since Parcels O-1 and O-2, which overlay portions of the groundwater plume, are being considered for unrestricted redevelopment, ENVIRON conducted a soil gas investigation on these two parcels in October 2004 (ENVIRON 2005). For Parcel O-1, the soil gas investigation focused on the southeast corner (near monitoring well RA-24) where high variations in detected concentrations of vinyl chloride and total petroleum hydrocarbon-Shell Sol 140 (TPH) had been identified during recent rounds of groundwater sampling. For Parcel O-2, the soil gas investigation focused on the northwest corner (near monitoring well A-30) where the highest

detected concentrations of TCE were found in the Redevelopment Area. Well A-30 is also downgradient of a potential TCE source area. Both monitoring well locations are shown on Figure IX.2.

The results of the soil gas investigation were compared to risk based target concentrations (RBTCs) that were developed as part of the Screening HHRA/Draft CCR for soil gas at depths of five feet and 15 feet below ground surface (bgs). The results indicated that the only chemicals detected in soil gas that exceeded the minimum RBTCs were TCE (residential only on Parcels O-1 and O-2) and benzene (residential only on Parcel O-1). Soil gas concentrations of vinyl chloride and TPH did not exceed the minimum soil gas RBTCs. None of the 15-foot soil gas sample results were above the minimum RBTCs. Given the low number of exceedances of RBTCs and the fact that these exceedances were only slightly above the RBTCs, ENVIRON concluded that residual concentrations of chemicals in groundwater on Parcels O-1 and O-2 did not pose an unacceptable risk to future receptors via inhalation.

DTSC, in their comments on the Draft CCR, noted that the original source area has not been identified for one area of elevated TCE in groundwater in the vicinity of Building 010. As former soil gas sample location SJ-SG-26 contained the maximum concentration of TCE observed in Parcel O-2 and displayed decreasing concentration with depth, DTSC noted that this may suggest a shallow source area and may indicate a historical release of TCE in the vicinity of this sample. The focus of this soil gas investigation will be to further evaluate this area to determine if any mitigation/remediation measures are needed.

IX.3 Project Planning

Soil gas samples will be collected from locations near former soil gas sample SJ-SG-26. Soil gas samples will be collected using the methodology described in greater detail in Section IX.4.

IX.4 Implementation of Sampling

All work will be performed or supervised by a California Registered Professional Engineer or Geologist. ENVIRON personnel will be present during all sampling activities to obtain samples of subsurface materials, make observations of work area conditions, conduct health and safety monitoring of organic vapors during temporary probe installation, and provide technical assistance as required.

Prior to initiating field activities, ENVIRON will conduct a survey of underground utilities at proposed sampling locations, arrange for drilling and analytical laboratory subcontractors, and update the Site-specific health and safety plan.

Soil gas samples will be collected from up to eight locations. The locations will be placed such that they form a 25-foot grid surrounding former soil gas sample SJ-SG-26. Proposed soil gas sampling locations are summarized on Table IX.1 and shown on Figure IX.3. Soil gas samples will be collected from a depth of five feet and 15 feet bgs using a Geoprobe™-type direct push drilling rig. Soil gas samples will be collected in general conformance with the California

Environmental Protection Agency (Cal/EPA) DTSC *Advisory on Active Soil Gas Investigations*, dated January 28, 2003 (the "Cal/EPA Advisory").

At each sampling location, soil gas samples will be collected from the desired depth via temporary probes. The temporary soil gas probes will be constructed of 1-inch outer diameter (OD) chrom-moly steel with an inert 1/8-inch diameter nylaflow tube that runs down the center of the probe to sampling ports beneath the tip. The temporary probe will be driven into the ground with an electric rotary hammer or similar apparatus. Once the desired depth is reached, the probe will be retracted slightly, which opens the tip and exposes the vapor sampling port. Following equilibration, soil gas will be withdrawn from the nylaflow tubing using a small calibrated syringe connected via a shut-off valve. The first three dead volumes of vapor will be discarded to purge the sample tubing. The next 20 cubic centimeters of soil gas will be withdrawn in the syringe, plugged and immediately transferred to a mobile laboratory for analysis or collected in a Summa™ canister if a fixed base laboratory is to be used. Per Cal/EPA's Advisory, the flowrate for purging or sampling shall not exceed 200 milliliters per minute (ml/min).

The temporary soil gas probe will be sealed as described in the Cal/EPA Advisory. During installation of the probe, hydrated bentonite will be used to seal around the drive rod at ground surface, and the inner soil gas pathway from probe tip to the surface will be sealed via an adapter fitted with an o-ring and connected to the probe tip. Leak tests will be conducted using 1,1,1-difluoroethane gas that is sprayed during sampling at locations where there is the potential for ambient air to enter the sampling system.

The soil gas samples will be analyzed using a mobile laboratory that is brought to the Site. The samples will be analyzed for VOCs using the United States Environmental Protection Agency (USEPA) Method 8260B. The target detection limit for VOCs will be 0.08 micrograms per Liter (μg/L). Roughly ten percent of the samples will be sent to a fixed base laboratory for confirmation of mobile laboratory results. These duplicate samples will be collected in Summa™ canisters and analyzed using USEPA Method TO-14.

A chain-of-custody (COC) form will be completed to maintain the custodial integrity of each soil gas sample. A minimum of one method blank will be collected each sampling day to verify the effectiveness of decontamination procedures and to detect any possible interference from ambient air. One duplicate sample will also be collected and analyzed per day. Laboratory Control Samples and Dilution Procedure Duplicates will be done in accordance with Cal/EPA's Advisory (Section 2.7.1C). In addition, a purge volume test at a minimum of one location near potential contaminant sources and a probe leak test will be conducted per sampling day as described in Section 2.3 and 2.4 of Cal/EPA's Advisory. Probe installation times, sample collections times, purge volume times and other pertinent data will be recorded in the field for eventual inclusion in a soil gas report.

To minimize the potential for cross-contamination between sample locations, all external probe parts will be cleaned and decontaminated before insertion. The internal nylaflow tubing and calibrated syringes will be replaced prior to insertion at new sampling locations.

Investigation derived waste (IDW) will be collected in 55-gallon drums that will be labeled and sealed following completion of field activities. Management and disposal of IDW will be the responsibility of Hitachi GST. ENVIRON will provide Hitachi GST with the relevant analytical results to assist Hitachi GST with appropriate management and disposal of IDW.

IX.5 Data Management and Reporting

Upon receipt of the analytical results, ENVIRON will prepare a summary table of the data and compare the results to each other and to the RBTCs previously developed for the Site in the Screening HHRA/Draft CCR. Based on this evaluation, a recommendation will be made for no further action, further investigation, and/or remediation. The results of this evaluation will be summarized in a short letter report (plus tables and figures) to be submitted to the DTSC.

IX.6 Project Schedule

It is anticipated that the soil gas sampling will take approximately two weeks to complete (including field and analytical) after authorization to proceed.

IX.7 References

City of San Jose, California. 2005a. Draft Environmental Impact Report. Hitachi Campus and Mixed-Use Transit Village Project. General Plan Amendment (GP04-02-01) and Planned Development Rezoning (PDC04-031). SCH#2004072110. Volume I through V. Approved as Final: June 6.

City of San Jose, California. 2005b. First Amendment to the Draft Environmental Impact Report. Hitachi Campus and Mixed-Use Transit Village Project. General Plan Amendment (GP04-02-01) and Planned Development Rezoning (PDC04-031). SCH#2004072110. Volume I through V. Approved as Final: June 6.

ENVIRON International Corporation (ENVIRON). 2005. *Draft Current Conditions Report, Hitachi Global Technologies, Inc., Redevelopment Area and Endicott Boulevard/Tucson Way, 5600 Cottle Road, San Jose, California.* July.

Regional Water Quality Control Board – San Francisco Bay Region (RWQCB-SF). 2002. Order No. R2-2002-0082, Final Site Cleanup Requirements and Rescission of Order No. 88-157. For: International Business Machines, San Jose, Santa Clara County, California. August 20.

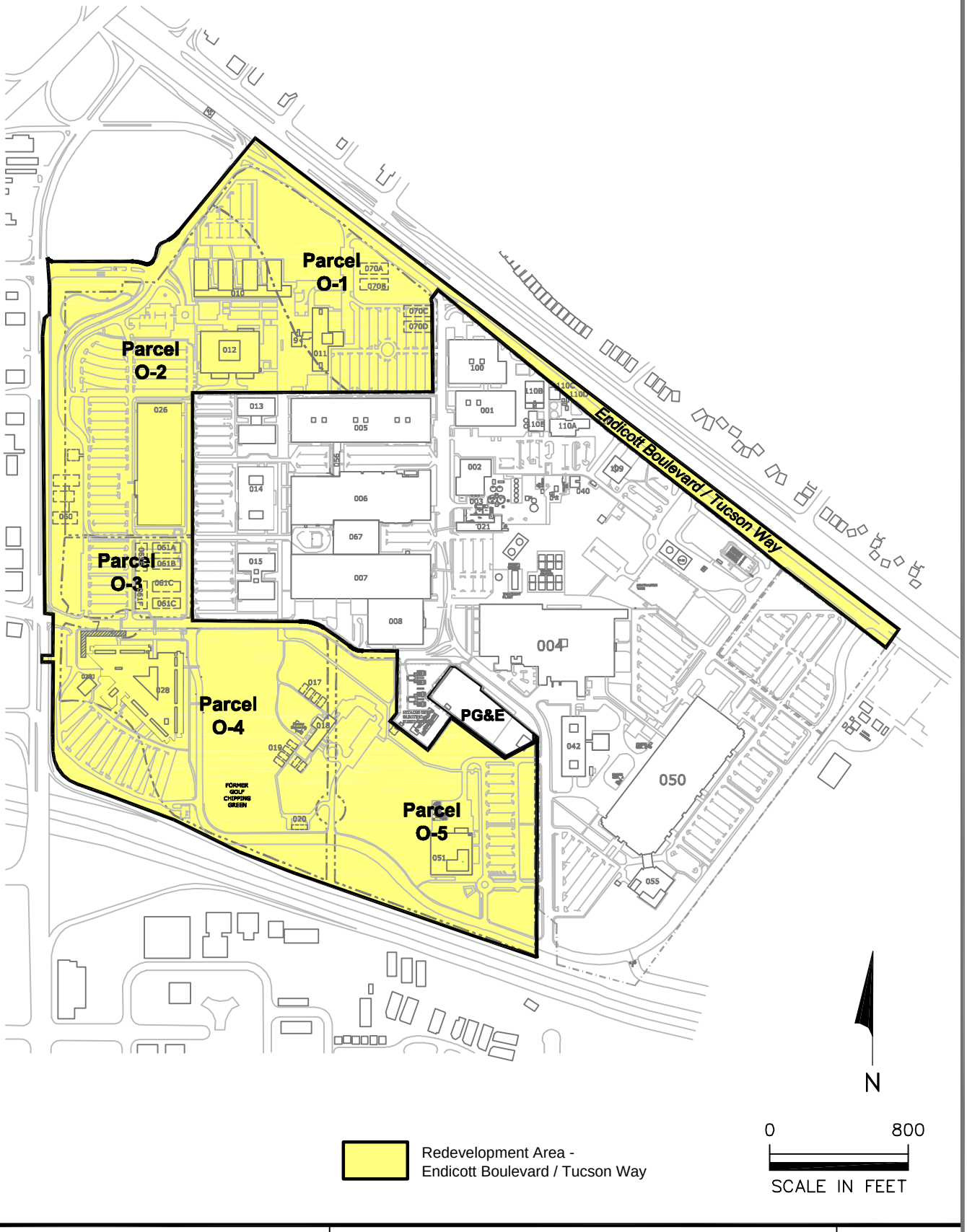
TABLE

Table IX.1
Sample Identification Table
Hitachi GST
San Jose, California

Sample Location ID	Parcel	Sample Type	Area	Location	Corresponding Figure	Sample Top Depth (ft bgs)	Sampling Consituent	USEPA Analysis Method Number
SG-26-1	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-2	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-3	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-4	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-5	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-6	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-7	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B
SG-26-8	O-2	Soil Gas	Parking Lot	Building 010 Parking Lot	Figure IX.3	5	VOCs	8260B

Notes:
ft = feet
bgs = below ground surface
USEPA = United States Environmental Protection Agency
VOC = Volatile Organic Compound

FIGURES



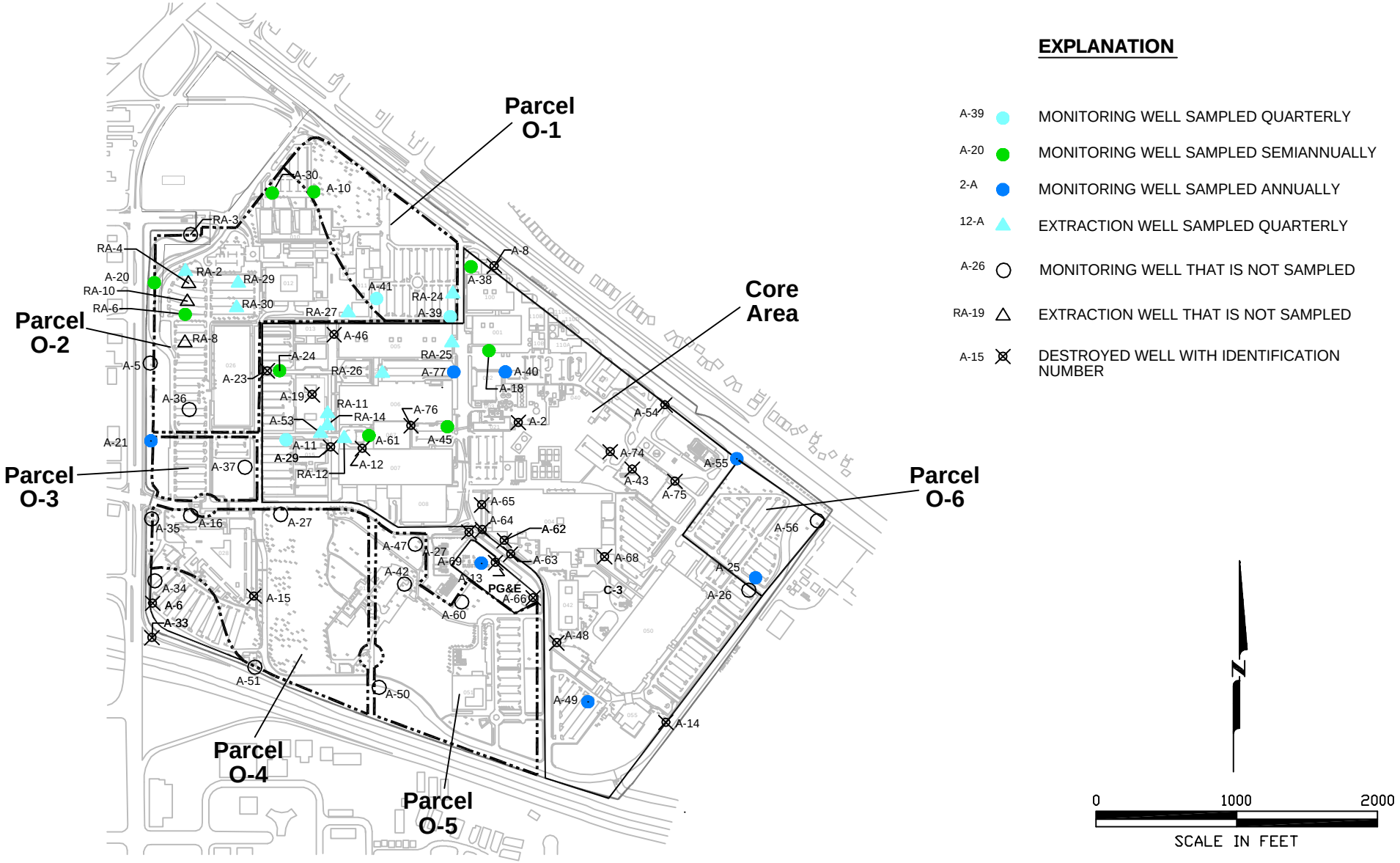
0311903E-REDEVELOPMENT-AREA.DWG

ENVIRON

Redevelopment Area
(Parcels O-1 through O-5) and
Endicott Boulevard / Tucson Way

Figure
IX.1

Drafter: RS | Date: 1/16/06 | Contract Number: 03-11903E | Approved: | Revised:



EXPLANATION

- A-39 — MONITORING WELL SAMPLED QUARTERLY
- A-20 — MONITORING WELL SAMPLED SEMIANNUALLY
- 2-A — MONITORING WELL SAMPLED ANNUALLY
- 12-A — EXTRACTION WELL SAMPLED QUARTERLY
- A-26 — MONITORING WELL THAT IS NOT SAMPLED
- RA-19 — EXTRACTION WELL THAT IS NOT SAMPLED
- A-15 — DESTROYED WELL WITH IDENTIFICATION NUMBER

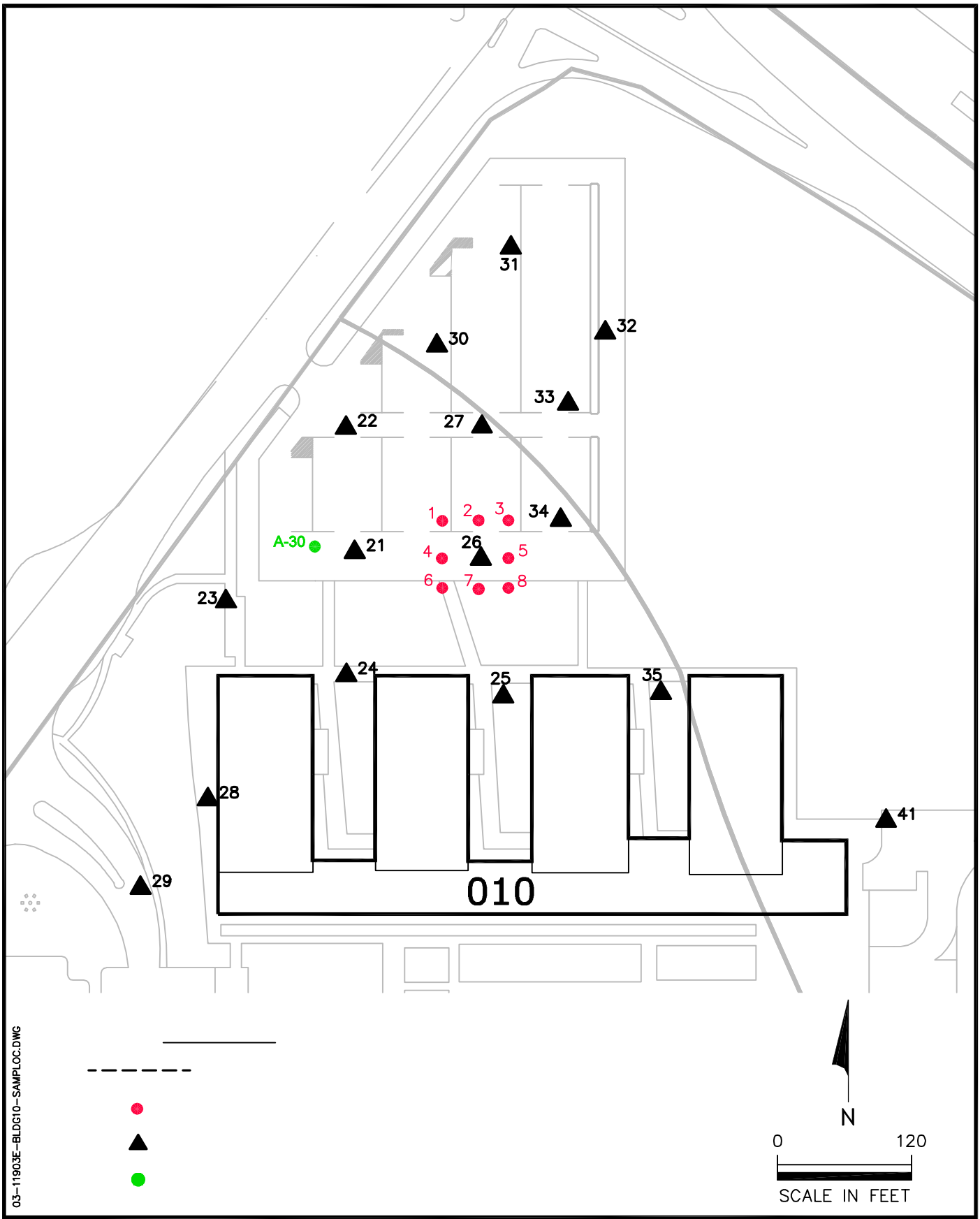
0313168A-A1_WELL LOC-MON_X WELLS.DWG

ENVIRON

On-Site Groundwater Monitoring and Extraction Well Locations - A-Aquifer
Hitachi GST
San Jose, California

Figure
IX.2

Drafter: RS | Date: 8/6/04 | Contract Number: 03-13168A | Approved: | Revised:



ENVIRON

Proposed Soil Gas Sample Locations
Parcel O-2
Hitachi GST
San Jose, California

Figure
IX.3

Drafter: RS | Date: 3/2/06 | Contract Number: 03-11903E | Approved: | Revised: