

## NEGATIVE DECLARATION

Department of Toxic Substances Control  
Hazardous Waste Management Program  
8800 Cal Center Drive  
Sacramento, CA 95826-3200

Subject:  DRAFT  FINAL  MITIGATED

Project Title: Corrective Action Remedy for Chloroform Impacted Area at Hitachi Global Storage Technologies, Inc.

State Clearinghouse No.: 2007082165

Project Location: 5600 Cottle Road, San Jose, CA 95193

County: Santa Clara

Project Description: This project is for the Department of Toxic Substances Control's (DTSC) approval of operation of a 2-Phase™ Extraction system to remove chloroform from soil, soil gas, and groundwater in the vicinity of former Building 028J on the Redevelopment Property of the Hitachi Global Storage Technology, Inc. (Hitachi GST) facility. The 2-Phase™ Extraction is similar to soil vapor extraction (SVE) in that a vacuum is applied to the subsurface inducing air flow to remove volatile organic compounds (VOCs), such as chloroform. During 2-Phase™ Extraction, groundwater and vapors are drawn into an extraction well by vacuum and removed through a suction pipe. The extracted vapor is treated using activated carbon and the extracted groundwater will be treated and re-used or disposed. The former Building 028J was located on the southwestern portion of the facility near the intersection of Cottle Road and Highway 85.

### Site Background

From 1955 to 2003, IBM owned the facility and conducted research, development and manufacturing operations related to computer storage devices, such as hard disk drives and disk storage media. Hitachi GST purchased the facility in January 2003 and has continued similar operations through the present time. Hitachi GST is planning to transfer ownership of approximately 143 acres of their 321-acre facility for redevelopment into commercial, residential and park areas. This 143-acre property is known as the Redevelopment Property and is located on the western side of the Hitachi GST facility. (Please see Figure 1.) On June 6, 2005, the City of San Jose Planning Commission certified the Final Environmental Impact Report (EIR) for the proposed General Plan Amendment (GPA) and Planned Development (PD) Zoning for the proposed redevelopment project.

The chemicals used at the facility include corrosive acids and bases, halogenated and non-halogenated organic solvents, lubricants, adhesives, and resins. Hitachi GST collected and evaluated information about potential releases of chemicals on the Redevelopment Property in the Current Conditions Report (CCR) dated July 2005. Based on this evaluation, the CCR identified areas on the Redevelopment Property that required additional investigation. Hitachi GST prepared a Soil Inspection/Sampling Plan (SI/SP) in January 2006 for the additional investigations. Hitachi GST completed these investigations in coordination with the site demolition and has prepared a set of SI/SP Completion Reports which summarize the investigation results. During these investigations, a release of chloroform was discovered in the vicinity of former Building 028J in Parcel O-4.

Building 028J, an approximately 2,000-square foot building, was located adjacent to the west of Building 028. Building 028J was constructed in 1971 as the chemical and chemical waste storage area for Building 028. According to a map of Building 028J dated 1984, the building was divided into two main chemical storage areas: "solvent storage area" and "user organics." Drums of solvents and cylinders of compressed gases were stored in Building 028J from 1971 until approximately 1989. An underground spill containment tank without secondary containment was formerly located east of Building 028J. This buried tank was removed in early 1982, and chloroform was detected in soil samples up to 1,600 micrograms per kilogram (ug/kg). No remedial actions appear to have been conducted following removal of the tank. Industrial wastewater from Building 028 was formerly collected in WV-03, which was located on the southeastern side of Building 028J. The industrial wastewater was pumped from a series of underground pipes in concrete trenches to the on-site wastewater treatment plant on the facility's Core Area. WV-03 and associated pipes were removed in 1989. Subsequent to 1989, Building 028J was vacant for several years before it was used as a staging area for the facility's landscape contractor. Building 028J was demolished in September 2006 as part of redevelopment activities. In April 2006 buried utilities in the Building 028J area were removed as part of the demolition of Building 028.

Hitachi GST prepared a CMS Report, Chloroform Release Area, dated August 29, 2007, that summarized the investigation results, identified cleanup goals, evaluated cleanup alternatives, and described how the cleanup would be implemented. Chloroform contamination in the Building 028J area appears to be due to direct releases to the subsurface. The contaminated area is 175 feet by 150 feet, or just over a half acre. The maximum chloroform concentrations recently detected were 34 micrograms per liter (ug/L) in soil gas and 920 ug/L in groundwater. The cleanup goals are 1.9 ug/L for soil gas and 80 ug/L for groundwater. The selected remedy consists of operating a 2-Phase™ Extraction system to remove chloroform from groundwater and soil gas until the cleanup goals are met.

### Health Risk Discussion

The overall cleanup goal (Corrective Action Objectives) for the chloroform release area in the Building 028J area is to prevent exposure of future occupants to elevated concentrations of chloroform in soil, soil gas and groundwater. The proposed land use for the Redevelopment Property is residential, commercial, and open space (or park) use. Based on these proposed future land uses, populations that could potentially be exposed to chemicals remaining on the property include residents (children and adults), commercial workers, and park visitors (children and adults). Additionally, there could be construction or maintenance workers. Risk Based Target Concentrations (RBTCs) were calculated for each of these populations for all chemicals detected in groundwater, soil gas, and soil. The RBTCs represent the concentration of a chemical that can remain and still be protective of human health for the future land use. The full list of RBTCs for the Redevelopment Property is presented in the Final Remedy Completion Report. For the vicinity of Building 028J the only compound of potential concern (COPC) is chloroform. The lowest RBTCs for residential land use for chloroform are 8.7 milligrams per kilogram (mg/kg) for soil, 1.9 ug/L for soil gas, and 380 ug/L for groundwater. These RBTCs are calculated to correspond to a cancer risk of  $1 \times 10^{-6}$  (one in a million). However, the Regional Water Quality Control Board – San Francisco Bay (RWQCB-SF) has specified a cleanup standard of 80 ug/L for trihalomethanes (chloroform is a trihalomethane) for groundwater at the Hitachi GST site. Consequently, this value is the cleanup goal for chloroform in groundwater. As a conservative screen, individual soil, soil gas, and groundwater sample results will be compared directly to the cleanup goal. In some cases where the single point concentration is above the RBTC, an exposure concentration may be calculated according to U.S. Environmental Protection Agency and DTSC risk assessment guidance. Once the corrective action has been completed, a risk assessment will be prepared for the Building 028J area. In addition to comparisons to RBTCs, this risk assessment will evaluate cumulative risks in order to ensure that cumulative exposure to multiple chemicals detected within the Redevelopment Property will not result in risks above an acceptable level.

### Corrective Action Remedy Implementation

2-Phase™ Extraction is similar to soil vapor extraction (SVE) in that a vacuum is applied to the subsurface inducing air flow to remove volatile organic compounds (VOCs), such as chloroform. During 2-Phase™ Extraction, groundwater and vapors are drawn into an extraction well by vacuum and removed through a suction pipe or “stinger.” The 2-PHASE™ Extraction system consists of a Rietschle VLR-500 high vacuum blower package with a pump-down vapor/liquid separator (knock-out tank). This unit is capable of producing vacuums of up to 25 inches of mercury, vapor flow rates of up to 300 cubic feet per minute (cfm), and groundwater extraction and transfer rates of up to 15 gallons per minute (gpm), although the anticipated groundwater extraction rate is only 1 to 2 gpm. The unit is skid-mounted and is installed near the extraction well field.

The extraction unit is connected to a treatment system consisting of two 1,000-pound vapor-phase granular activated carbon (GAC) vessels installed in series to treat the extracted vapors. The supplied GAC consists of virgin coconut shell carbon. The extraction unit is equipped with a heat exchanger for humidity control to increase the efficiency of carbon adsorption. Following treatment with GAC, the extracted vapors are discharged to the atmosphere in accordance with a permit issued by the Bay Area Air Quality Management District (BAAQMD). Mass removal rates will be calculated and compared to the carbon adsorption curves to evaluate the carbon change-outs that will be required during the life of the project. The spent carbon vessels are returned to the vendor for recycling or disposal.

Extracted groundwater is contained in closed-top holding tanks for subsequent treatment, reuse, and/or disposal. As the Hitachi GST facility has industrial water needs and on-site water treatment facilities, there are opportunities for treatment and/or reuse of water on-site. Hitachi GST is investigating these alternatives based on technical feasibility, environmental soundness, and regulatory acceptance. As a contingency measure, some of the extracted water may also be transported via vacuum truck by a commercially-licensed vendor for off-site treatment/disposal.

The extraction and treatment systems will operate on a 24-hour basis. Electrical power for system operation is provided by a diesel powered portable generator operating under a Statewide Portable Equipment Registration from the Air Resources Board. The system design includes built-in alarms and a shutdown mechanism should system problems arise. The system will be inspected weekly to make adjustments and/or repairs, as needed, to record operating parameters, and to collect water and vapor samples. On a weekly basis, vapor samples will be collected from the influent and effluent

ports of each GAC vessel and analyzed using a photoionization detector (PID). The PID measures VOCs and the results are used to determine breakthrough and when carbon change-out is necessary. Every two weeks vapor samples will be collected from the inlet port of the carbon treatment system to evaluate the performance of the extraction unit. On a monthly basis vapor samples will be collected from the effluent port of the carbon treatment system to comply with BAAQMD permit conditions. Samples of extracted groundwater will be collected on a monthly basis, or as otherwise needed, to assess system performance. In all cases, monitoring and sampling frequencies may be adjusted depending on system performance and field conditions. Based on system performance operational changes may be made, such as: adjustment of stinger depths, altering flow rates, temporary system shutdowns to maximize operational efficiency (temporal pulsing), and/or turning on/off individual extraction wells to isolate certain zones (zone pulsing).

In order to expedite cleanup of their property, Hitachi GST installed 15 extraction/monitoring wells in April and May 2007, conducted a pilot-scale test in June 2007, and started full-scale operation of the 2-Phase™ Extraction system on July 25, 2007. Chloroform concentrations are expected to decline rapidly in the first several months of operation and reach a steady state level within a year.

The extraction system will be operated, to the extent practicable, until the cleanup goals are met. The primary performance criteria will be the concentrations of chloroform in extracted vapor and groundwater. If extracted concentrations of chloroform decrease significantly, the system may be shut down temporarily or permanently. Decisions on shutdown will be based on a review of the extracted chloroform concentrations and secondary performance criteria, which include vapor flow rates, applied vacuum, vacuum radius of influence, groundwater extraction rates, and water table drawdown. These criteria will be used to decide whether changes in operation, including temporal or zone pulsing of the system, may increase removal rates or improve the effectiveness of the cleanup. If changes are not likely to improve the cleanup, temporary system shutdown will be followed by interim monitoring of soil gas and groundwater. Interim monitoring will consist of monthly monitoring of groundwater collected from the monitoring/extraction wells and soil gas collected from temporary or semi-permanent soil gas probes placed at intermediate points between the monitoring/extraction wells. If chloroform concentrations meet the cleanup goals for three consecutive months, DTSC will evaluate whether the extraction system will be permanently shut down and the equipment demobilized.

Concentrations in groundwater and soil gas tend to increase or “rebound” to some extent several months after implementation of 2-Phase™ Extraction. Post-remedial monitoring will be implemented for an additional three months after equipment demobilization to assess rebound of chloroform concentrations. If after three months of post remedial monitoring, the risk assessment for this area shows risks are within acceptable ranges for residential land use, the cleanup will be determined to be complete. If rebound is unacceptable, the extraction system may be returned to operation. If the cleanup goals cannot be met by continued operation of the 2-Phase™ Extraction system, then an alternative remedial approach will be considered and potential environmental impacts will be evaluated in a separate CEQA document.

Finding Of Significant Effect On Environment: *(An Initial Study supporting this finding is attached.)*

On the basis of the information presented in the attached Initial Study, I find that the proposed project will not have a significant effect on the environment.

Mitigation Measures:

None.

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| // original signed by //                         |   | 11/26/2007                         |
| _____<br>Branch Chief Signature                  |   | _____<br>Date                      |
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