INGERSOLL RAND CORPORATION
DATA SUMMARY REPORT

SUBJECT SITE: 1944 Marina Boulevard
San Leandro, California

Prepared for:

Ingersoll Rand Corporation
954 Marion Boulevard
Allentown, Pennsylvania 18103-9552

Prepared by:

IT Corporation
4585 Pacheco Boulevard
Martinez, California 94553

December 1990

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Approved by: William Schaal Date: 4 January 1991
William Schaal
Project Manager

Approved by: John Sciacca Date: 1/4/91
John Sciacca
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1.0 INTRODUCTION

This report provides a summary of data gathered by International Technology Corporation (IT) while completing the scope of work established in the "Proposal for Preliminary Remedial Design for Soil and Groundwater, San Leandro, California Facility". IT began the investigative portions of the proposed scope of work on October 18, 1990 at the Ingersoll Rand Corporation equipment maintenance facility located at 1944 Marina Boulevard in San Leandro, California (Figure 1). The investigation was implemented in part to a request from the Regional Water Quality Control Board (RWQCB) and the Alameda County Department of Environmental Health (ACDEH). Following submission of an Unauthorized Release Report by Ingersoll Rand in mid-1989, IT was retained to perform an initial site assessment addressing possible soil and groundwater contamination. The ACDEH and RWQCB reviewed the Problem Assessment Report written by IT (December 1989) and requested that remedial action be undertaken.

2.0 PURPOSE

The purpose of the recent investigation was to further define the physical and chemical characteristics of site soils and groundwater and provide initial data for the development of a preliminary remedial design. Specifically, the investigation sought to: 1) determine whether the dissolved-phase fuel hydrocarbon plume in groundwater extends to the western border of the site; 2) further describe the lithology of the subsurface; 3) estimate selected hydraulic properties of the phreatic zone soils in the vicinity of two wells being considered for potential use as groundwater extraction wells; and 4) estimate vadose zone vapor transmissivity around the location that was once occupied by an underground storage tank.

3.0 FIELD INVESTIGATION

The scope of work for the field investigation included:

- Core-drilling and logging of 12 soil borings.
- Installation of one groundwater monitoring well and four soil vapor extraction wells.
- Collection of soil and groundwater samples from the soil borings and the new monitoring well.
- Chemical analysis of 33 soil samples and one groundwater sample.
- Performance of soil vapor extraction pilot tests.
- Aquifer performance testing by step drawdown methods on groundwater wells MW-3 and MW-4.

3.1 DRILLING

All soil borings and monitoring wells were drilled with a truck mounted auger drilling rig using eight- and twelve-inch outside diameter hollow stem augers. Continuous subsurface logging was accomplished through the use of a 60-inch split barrel sampler to retrieve core samples. Boring depth ranged from 20 to 30 feet below surface. Each borehole was filled to the surface with 10 sack sand mix grout using a one inch tremie pipe. Borehole logs are included in Appendix A.

All drilling equipment was steam cleaned between each boring and all coring/sampling equipment was scrubbed and rinsed with Alconox™ solution and water between coring or sampling. Associated liquids and residue were contained and stored with the drill cuttings for proper disposal at an appropriate facility.

The collection of samples for chemical analysis was achieved by fitting the split barrel sampler with 2" x 6" brass sampling tubes at the desired sampling depth. Following sample collection, brass tubes were sealed with foil and plastic caps and either provided to the on-site state-certified mobile lab or stored on ice for later analysis at a base laboratory. The on-site mobile lab provided rapid analysis that allowed real-time decisions during the investigation to optimize placement of monitoring wells and soil borings.

Analysis conducted at the state-certified base lab was for samples needed to complete the investigative survey, but not required for immediate field decisions.

3.2 WELL INSTALLATION

One groundwater monitoring well (MW-4) and four soil vapor extraction/ monitoring wells (VW-1, VW-2, VW-3, and VW-4) were installed directly adjacent to continuously cored soil borings. Real-time decisions made possible through the use of on-site state-certified mobile lab, allowed for immediate well design and installation. All wells were constructed using four inch PVC flush-joint well casing with either a five or ten foot slotted screen. Filter pack was placed around the entire screen area and a bentonite pellet seal was placed above the filter pack. The remaining annular space above the bentonite seal was grouted using neat cement grout with five percent bentonite. The wells were secured with locking well caps and flush mounted christy box well covers. The soil vapor extraction wells were placed no more than one foot above the encountered water table. The groundwater monitoring well was designed such that the water table remained within the screened interval to detect possible floating free product. Because no long term data regarding water table levels is known by IT to exist, well designs were based on present groundwater levels.

Well construction details regarding depths, seals, filter pack, well screen and casing are provided for each well with its respective boring log in Appendix A of this report. Additionally, well construction records for the first three groundwater wells (MW-1, MW-2, and MW-3) installed by IT in November 1989 are also included in Appendix A.

3.3 SURVEYING

All four groundwater monitoring wells were surveyed by a licensed contractor to determine elevation above mean sea level (MSL) for each well head. The well cover and the PVC casing top at each well were surveyed to the MSL elevation datum. These measurements are recorded in Appendix B.

The casing tops for wells MW-1, MW-3, and MW-4 were used as reference points to obtain approximate elevations for the soil borings and soil vapor wells.

Elevations were taken by use of a hand held level (Brunton compass) and a graduated surveyor's rod and therefore, are considered to be approximate measurements.

3.4 CHEMICAL ANALYSIS

Soil and groundwater samples were collected and analyzed for total petroleum hydrocarbons as gasoline (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX). Soil analysis were performed using EPA Method 5030 and TPH LUFT with EPA Method 8020 used for BTEX distinction. Water analysis were performed using EPA Method 5030 and TPH LUFT with EPA Method 602 used for BTEX distinction. Analyses were performed by Mobile Chem Labs in either their on-site state-certified mobile lab or their base laboratory in Turlock, California. Table 1 summarizes the results of all chemical analysis performed for this portion of the project. Appendix C contains analytical reports and manifests for analytical requests and sample chain of custody.

3.5 AQUIFER TESTING

Because free product was reported in groundwater monitoring well MW-3 during well guaging events (Table 2) and dissolved phase hydrocarbons were found in groundwater monitoring well MW-4 (Table 1), it was desirable to examine the potential utility of these wells as extraction wells and collect data to aid in estimating aquifer characteristics. Review of borehole logs for all four groundwater monitoring wells shows that groundwater is present in low permeability materials consisting primarily of clay and silty sand. Results from step drawdown pumping tests performed on wells MW-3 and MW-4 confirm that low permeability conditions exist for the water bearing zone. Due to very low yields observed during pump tests, it is unlikely that wells MW-3 and MW-4 can serve as extraction wells if continuous pumping is employed in a standard pump and treat program. Present knowledge does not permit design of a groundwater remediation scheme. A more thorough and comprehensive groundwater investigation proposal is forthcoming.

Wells were pumped, one at a time, with a down hole submersible pump set on the well bottom. Monitoring well MW-4 was pumped at the rate of 0.6 gallons per minute (gpm) until drawdown did not continue to increase. A sustainable drawdown of 1.7 feet below the static level was attained in 50 minutes. The

pumping rate was then increased to 0.9 gpm until a sustainable drawdown of 3.6 feet below the static level was attained in 26 minutes. Monitoring well MW-3 was pumped dry in 20 minutes at a discharge rate of 0.3 gpm and no other pumping episode was conducted for the well.

Results from step drawdown pumping tests were used to determine numerical estimates for specific capacity (sc), long term yield (y), transmissivity (T), and hydraulic conductivity (K). Resultant values for these parameters are presented in Table 3. Numerical estimates for sc and y were derived using the respective equations (Heath, 1984, pp 58 and 59).

$$sc = \frac{Q}{s}$$

$$y = (sc)(s_a)$$

Where,

sc = specific capacity or yield per unit of drawdown for test well

Q = discharge or average pumping rate from the test well

s = drawdown maintained in test well

y = estimated long term yield for test well

s_a = available drawdown in test well

Numerical estimates for T and K were derived using empirical equations developed from the modified non-equilibrium (Jacob) equation which relates sc to T (Driscoll, 1986, p 1021).

These equations are:

$$sc = \frac{T}{1500}$$

$$K = \frac{T}{b}$$

Where,

sc = specific capacity or yield per unit of drawdown for test well

T = transmissivity or aquifer's capacity to transmit water

K = hydraulic conductivity

b = saturated thickness of screened interval in test well

3.6 SOIL VAPOR EXTRACTION PILOT TEST

The soil vapor extraction pilot tests were conducted to provide data to aid in future determination of the viability of soil venting for remediation of volatile organic compounds (VOC's) in vadose zone soils. Four soil vapor monitoring/extraction wells, VW-1 through VW-4, were installed during recent field investigations. These vadose wells and an additional two groundwater monitoring wells, MW-3 and MW-4, were utilized during the pilot tests. Well locations are shown in Figure 2 and screened intervals are shown on well construction records included in Appendix A.

Test results are strongly indicative that soil matricies are amenable to treatment by venting (soil vapor extraction). Vacuum was applied individually to each of three different soil vapor wells with a portable vacuum blower. During testing, pressure was monitored and recorded at each of the remaining five test wells. IT protocol requires that once "equilibrium" conditions are attained (i.e., when the pressure drop is less than or equal to 10 percent of the total pressure drop) vacuum pressure is reduced to 75 percent of the initial vacuum pressure. Applied vacuum pressures ranged from one to almost 60-inches of water and were drawn at air velocities ranging from approximately 55 to 760 standard cubic feet per minute (SCFM). Data gathered during field tests is presented in Tables 4 through 7. Application of vacuum to the test well produced pressure readings in the vadose monitoring wells generally equivalent to one another for each vacuum applied. From this it is inferred that communication between wells exists and that vapor conductivity is about the same for the soils around each monitoring well. There is a general consensis that for an applied vacuum of up to 100 inches of water the induced vacuum can usually be detected at the .01 inch level to a distance of up to 100 feet. During IT tests, induced vacuum measurements greater than .01 inches of water were recorded in observations wells nearly 200 feet from the pumping well. From this it is inferred that the soil matricies are appreciably permeable. Detailed discussion providing actual vapor conductivities and radii of influence for each test well will be included in the forthcoming document addressing the design of the actual soil vapor extraction remediation system.

4.0 GENERAL LITHOLOGY

The site geology has been generalized in two cross-sections shown as Figures 4 and 5. These graphic representations of lithology are interpretations generated from data collected at bore hole locations and were prepared to show the permeable units containing adsorbed phase fuel hydrocarbons.

The soils beneath the site generally consist of an upper zone of highly organic silt or clay ranging in thickness from one foot to four feet. Soils from the surface down to four feet were dry to slightly moist and graded into silty to sandy clay or clayey silt. The thickness of the silty to sandy clay and clayey silt ranged from three to seven feet and was slightly moist to moist at the boring locations. At some boring locations, a sand zone ranging in thickness from one to two feet was encountered between three to seven feet below surface. The stratum beginning at depths between 10 to 15 feet below surface and continuing as deep as 20 feet was either a silty to clayey fine sand, a poorly graded fine sand, or a localized coarse sand and gravel. The water table was consistently encountered at the bottom of or underlying this unit between 17 and 21 feet below surface. Consistently beneath the prominent sand or gravel unit was a highly plastic to moderately plastic clay layer encountered at a depth of 20 feet and extending to the bottom of all boreholes, up to 30 feet below surface.

Menlo Street channel of S.C. creek mapped proximal to site

The presence of the coarse sand and gravel unit appears to be the result of a high energy stream channel deposit. The unit was encountered in the distinct area of borings CC-05, and CC-08 through CC-12. Other fluvial channels consisting of sands are identifiable in the borehole logs and geologic cross-sections. There is a strong probability that one or more of these channels are connected with one another and together form a pathway possessing medium to high permeability.

5.0 DISTRIBUTION OF HYDROCARBON CONSTITUENTS

Analytical results from soils testing during this portion of the project are included in Table 1. All soil samples for chemical analysis were collected below a depth of 10 feet and the analytical results from the samples tested indicate that the distribution of fuel hydrocarbons in soils is probably limited to a one to two-foot layer at depths of 14 to 18 feet, just above the existing water table. Throughout much of this contaminated layer extending approximately 150 by 180-feet, soils are sands and gravels. Gravels are thickest around the area once occupied by the removed gasoline tank. In this area the contamination layer vertically increases to four to six feet. The presence of a thin film of free phase product was noted in borehole CC-08 at the clay and gravel interface approximately 18.5 feet below grade. Additionally, borehole screening of CC-08 and CC-09 with an organic vapor analyzer (OVA) equipped with a photoionization detector (PID) measured increasing concentrations of organic vapors with increasing depth. The proximity of boreholes CC-08 and CC-09 to the area once occupied by the removed gasoline tank may be the cause for these phenomena.

Analysis of groundwater collected from MW-4 indicates that dissolved-phase fuel hydrocarbons are impacting groundwater to the southwestern boundary of the site. Results of the analysis, in parts per billion (ppb), for analytes and their respective concentrations are: TPH, 32000; benzene, 1500; toluene, 2000; ethylbenzene, 720; and total xylenes, 27000. Analytical results for the groundwater sample are included in Table 1. Figure 6 shows the groundwater flow direction estimated from well gauging data collected November 16, 1990 (Table 7). This direction is roughly to the southwest and is approximately the same as reported by IT in December 1989.

6.0 REFERENCES

Driscoll, Fletcher G., 1986; "Groundwater & Wells", Johnson Division, St. Paul, MN;, p. 1021.

Heath, Ralph C., 1983; "Basic Groundwater Hydrology", U.S. Geological Survey Water Supply Paper 2220; pp 58 and 59.

IT Corporation, 1989, "Problem Assessment Report" 12 pp.

IT Corporation, 1990, "Proposal for Preliminary Remedial Design for Soil and Groundwater, San Leandro, California Facility", 6 pp.

Kroopnick, P., and Storm, A., 1990; "Modeling the In Situ Venting of Soil for Hydrocarbon Remediation," 10 pp.

TABLES

TABLE 1

ANALYTICAL SUMMARY - OCTOBER 1990
SOIL SAMPLES
Ingersoll Rand
San Leandro, California
Results in mg/kg (parts per million)

BORING	DEPTH	TPH	B	T	X	E
CC-01	13.50	<1.0	<0.005	<0.005	<0.005	<0.005
CC-01	17.50	<1.0	<0.005	0.005	0.010	<0.005
CC-02	16.00	<1.0	<0.005	<0.005	<0.005	<0.005
CC-02	19.00	1.0	0.30	<0.005	0.043	0.029
VW-4 CC-02	20.50	190	3.0	48.0	29.0	5.9
CC-02	27.50	<1.0	0.065	<0.005	<0.005	0.011
CC-03	15.00	<1.0	0.006	0.011	0.030	0.008
CC-03	18.50	<1.0	0.006	0.012	0.028	0.006
CC-04	16.50	<1.0	<0.005	<0.005	<0.005	<0.005
CC-04	19.00	<1.0	<0.005	<0.005	<0.005	<0.005
CC-04	22.00	7.6	1.1	0.91	1.3	0.25
CC-04	26.00	1.2	0.30	0.030	0.20	0.04
CC-05	13.00	<1.0	<0.005	<0.005	<0.005	<0.005
CC-05	16.50	<1.0	0.019	0.026	0.040	0.008
CC-06	18.00	<1.0	<0.005	0.006	0.011	<0.005
CC-06	15.00	<1.0	<0.005	<0.005	<0.005	<0.005
CC-06	19.50	<1.0	0.005	0.009	0.015	<0.005
CC-07	15.00	<1.0	<0.005	<0.005	<0.005	<0.005
CC-07	18.00	<1.0	<0.005	0.006	0.015	<0.005
VW-1 CC-08	9.50	<1.0	<0.005	0.006	0.016	<0.005
CC-08	14.50	12	0.44	0.49	1.2	0.23
CC-09	9.00	<1.0	<0.005	<0.005	<0.005	<0.005
VW-2 * CC-09	14.50	180	0.25	2.6	15.0	6.4
CC-10	14.00	<1.0	0.011	<0.005	0.008	<0.005
CC-10	18.20	<1.0	0.077	<0.005	<0.005	<0.005
VW-3 CC-10	19.50	150	3.0	7.1	14.0	4.5
CC-10	22.00	1.4	0.42	0.020	0.071	0.033
CC-11	15.00	<1.0	0.011	<0.005	0.011	<0.005
CC-11	18.50	<1.0	0.022	0.009	0.043	0.012
CC-12	16.00	1.0	0.12	0.46	0.145	0.018
CC-12	18.20	15	0.36	0.66	1.9	0.34
MWC-4	17.00	<1.0	<0.005	<0.005	<0.005	<0.005
MWC-4	19.00	<1.0	<0.005	<0.005	<0.005	<0.005

Groundwater Samples
Results in ug/l (parts per billion)

BORING	DEPTH	TPH	B	T	X	E
MW-4	*******	32000	1500	2000	27000	720

Notes:

Depth reported in feet
TPH = Total Petroleum Hydrocarbons
B = Benzene
T = Toluene
X = Xylenes
E = Ethylbenzene

CC = Continuous Core
MWC = Monitor Well Core
Analysis Performed by:
Mobile Chem Labs
Turlock, CA

TABLE 2

GROUNDWATER ELEVATIONS
Ingersoll Rand
San Leandro, California

Well ID #	Date	DTP (ft)	DTW (ft)	PT (ft)	TOC (ft)	ELEV. - P (ft)	ELEV. - W (ft)	CORR PIEZ (ft)
MW - 1	13-Dec-90	* * *	14.01	* * *	24.78	* * *	10.77	10.77
MW - 1	16-Nov-90	* * *	14.84	* * *	24.97	* * *	10.32	10.32
MW - 2	13-Dec-90	* * *	14.57	* * *	24.70	* * *	10.13	10.13
MW - 2	16-Nov-90	* * *	15.05	* * *	24.64	* * *	9.59	9.59
MW - 3	13-Dec-90	17.12	17.13	0.01	27.33	10.21	10.21	10.21
MW - 3	16-Nov-90	17.67	17.67	trace	27.51	* * *	9.84	9.84
MW - 4	13-Dec-90	* * *	* * *	* * *	* * *	* * *	* * *	* * *
MW - 4	16-Nov-90	* * *	20.28	* * *	28.92	* * *	8.64	8.64

Notes:

DTP = Depth to Product
DTW = Depth to Water
PT = Product Thickness
TOC = Top of Casing Above Mean Sea Level
ELEV. P = Elevation of Product Above Mean Sea Level
ELEV. W = Elevation of Water Above Mean Sea Level
CORR PIEZ = Corrected Piezlometric Surface (without existing free product)
* * * = Not Measured
(ft) = feet

MW - 4 installed after well guaging 13 Dec 90
TOC survey conducted prior to well guaging events of 13 Dec 90 & 16 Nov 90

13 Dec 90 Measurements by International Technology Corp.
16 Nov 90 " "

TABLE 3

NUMERICAL ESTIMATES of WELL / AQUIFER CHARACTERISTICS
DETERMINED with STEP DRAWDOWN PUMPING TEST DATA
Ingersoll Rand
San Leandro, California
November 19,1990

	MEASURED		NUMERICAL ESTIMATES			
Test Well ID #	Discharge Rate (Q) gal/min	Drawdown (s) ft	Specific Capacity (sc) gal/min/ft	Long term yield (y) gpm /sq. ft	Transmissivity (T) gal/dy/ft sq. m / dy	Hydraulic Cond. (K) gal/dy/ft m/dy
MW - 3	0.3	8.00	* * *	* * *	* * *	* * *
MW - 4	0.6	1.7	0.35	1.34	523 6.6	67 3
MW - 4	0.9	3.6	0.25	0.96	377 4.8	48 2. 2

Notes:

gal = U.S. gallons
min = minutes
ft = feet
sq. ft = feet squared
sq. m = meters squared
gpm = U.S. gallons per minute
dy = day
m = meters

* * * = Not determinable . See additional notes:
MW - 3 pumped dry at 20 minutes.
Water volume removed = 1.6 U.S. gallons
Well recovery = 60% in a period slightly greater than 2 hours.

TABLE 4
SOIL VAPOR EXTRACTION PILOT TEST RESULTS
Test #1 —Vacuum Well VW-3
Vacuum Pressures of 10, 5, & 1 Inches of water
Ingersoll Rand
November 8,1990

TIME	PRESSURE READINGS -- INCHES OF WATER MONITORING WELLS				
MIN:SEC	MW-3	VW-1	VW-2	VW-4	MW-4
0:30			0.31		
0:35		0.31			
1:15	0.33				
1:45			0.59		
2:15		0.45			
3:00	0.44				
3:45			0.62		
4:00				.4	
5:00			0.63		
5:30	0.45				
6:00		0.47			
6:30				0.43	
7:00					0.07
8:30			0.65		
9:00		0.49			
9:30	0.47				
12:00		0.49		0.46	
13:00					0.09
14:00			0.65	0.44	
15:00	0.47	0.49			
17:30				0.46	0.08
20:00	0.45	0.47	0.63	0.45	0.09
48:30	--VACUUM PRESSURE STEP DOWN--				
48:45			0.46	0.42	0.08
49:00				0.39	0.08
49:30			0.41	0.37	0.07
49:45				0.36	0.07
50:00		0.28		0.32	0.07
50:15				0.31	0.07
50:30	0.26	0.27		0.29	0.07
51:15				0.27	
51:00	0.25			0.25	
52:00	0.25	0.24			
52:30	0.24		0.32	0.24	
53:00				0.24	
53:30				0.23	
54:00			0.32		
59:00	0.22	0.22			
60:00					0.06
61:00					0.06
61:30	--VACUUM PRESSURE STEP DOWN --				
61:45			0.23	0.21	0.06
62:00			0.20	0.19	0.06
62:15				0.16	0.06
62:30				0.15	0.05
62:45		0.12		0.14	0.04
63:00		0.12		0.12	0.04
63:15		0.11			
63:30	0.10			0.11	0.04
64:00	0.10			0.09	0.04
64:30	0.09		0.13		0.03
65:00				0.08	
65:30			0.12	0.07	0.03
66:00		0.08	0.12	0.07	0.03
67:00		0.09		0.06	0.03
69:00	0.07	0.07	0.09		
70:00	0.07	0.06			0.04

TABLE 5
SOIL VAPOR EXTRACTION PILOT TEST RESULTS
Test #2A & #2B --- Vacuum Well VW-4
Vacuum Pressures of 58,39 & 19 inches of water
Ingersoll Rand
November 8,1990

TIME	PRESSURE READINGS -- INCHES OF WATER MONITORING WELLS				
MIN:SEC	MW-3	VW-1	VW-2	VW-3	MW-4: TEST#2B
0:15				0.00	-0.01
0:45				0.00	-0.01
0:50			0.02		
1:00				0.04	0.00
1:15		0.02			0.00
1:30	0.02			0.06	0.01
2:00			0.04	0.06	0.01
2:15		0.03			0.02
2:30	0.03				0.02
3:00			0.05	0.09	0.02
3:15		0.04			0.03
3:30	0.04			0.10	0.03
3:45			0.06		0.02
4:00				0.12	0.03
4:30	0.05	0.05	0.07		0.03
5:00			0.07		0.03
5:30	0.05	0.05		0.11	0.03
6:00		0.05	0.07	0.12	0.03
7:00		0.05	0.07	0.11	0.03
10:00	0.04				--STEP DOWN--
11:00	0.04	0.04	0.06		11:15=0.03
12:00	0.04	0.04	0.06		11:30=0.03
13:00					11:45=0.02
14:00				0.11	12:00=0.02
15:00			0.06	0.11	12:15=0.02
16:00	0.04	0.04			12:30=0.01
17:30					13:00=0.01
20:00					13:15=0.00
27:00			0.06		14:00=0.00
30:00					15:00=0.00
33:00	-- VACUUM PRESSURE STEP DOWN --				**16.00**
33:15		0.03		0.12	--STEP DOWN--
33:30	0.04			0.12	16:15=0.00
33:45				0.12	16:30=0.00
34:00			0.05	0.12	17:00=0.00
34:15		0.03		0.11	17:30=-0.01
34:30	0.04			0.11	18:00=-0.01
35:00			0.05	0.11	20:00=-0.01
36:00	0.03	0.02		0.10	22:00=-0.02
37:00	0.03	0.03	0.05	0.10	23:00=-0.01
38:00		0.02	0.04	0.10	23:30=-0.02
45:00				0.09	
54:00			0.04		
55:00	0.03	0.02		0.09	
60:00	-- VACUUM PRESSURE STEP DOWN --				
60:15		0.03	0.05		
60:30	0.03			0.09	
60:45				0.08	
61:00			0.04	0.08	
61:15			0.03	0.07	
61:30		0.02	0.03	0.07	
61:45	0.02			0.06	
62:00			0.03	0.06	
62:15		0.01			
63:00	0.02			0.06	
64:00	0.02	0.02		0.06	
65:00	0.01	0.01	0.02	0.05	
66:00	0.01	0.00		0.05	
66:30			0.02		
67:00	0.01	0.01		0.04	

TABLE 6

SOIL VAPOR EXTRACTION PILOT TEST RESULTS

Test #3A — Vacuum Well VW-1

Vacuum Pressure of 1.5 inches of water

Ingersoll Rand

November 9,1990

TIME	PRESSURE READINGS – INCHES OF WATER MONITORING WELL				
MIN:SEC	MW-3	VW-2	VW-3	VW-4	MW-4
0:05		0.01			
0:10			0.00		
0:20	0.05				
0:30			0.01		
0:35		0.07			
0:45			0.02		
0:50	0.05				
1:00		0.10	0.03		-0.01
1:15	0.05	0.10	0.03		
1:30			0.03		
1:45	0.05		0.04		
2:00		0.10	0.04		-0.01
2:15	0.05			0.04	
2:30		0.11	0.05		
2:45	0.06				
3:00		0.11	0.05		-0.01
3:15	0.06			0.05	
3:30		0.11	0.05		
3:45	0.08				
4:00		0.12			
4:30	0.08	0.11		0.05	-0.01
5:00	0.08	0.10	0.05	0.04	
5:30	0.06	0.09			
6:00	0.07				
6:30	0.07	0.11			0.00
7:00	0.07	0.11			
7:30	0.06	0.10			
8:00		0.10		0.04	0.00
8:30	0.06	0.10	0.05		
9:00	0.07				
9:30		0.10			

TABLE 7

SOIL VAPOR EXTRACTION PILOT TEST RESULTS

Test #3B — Vacuum Well VW-1

Vacuum Pressures of 3.5 & 2 Inches of water

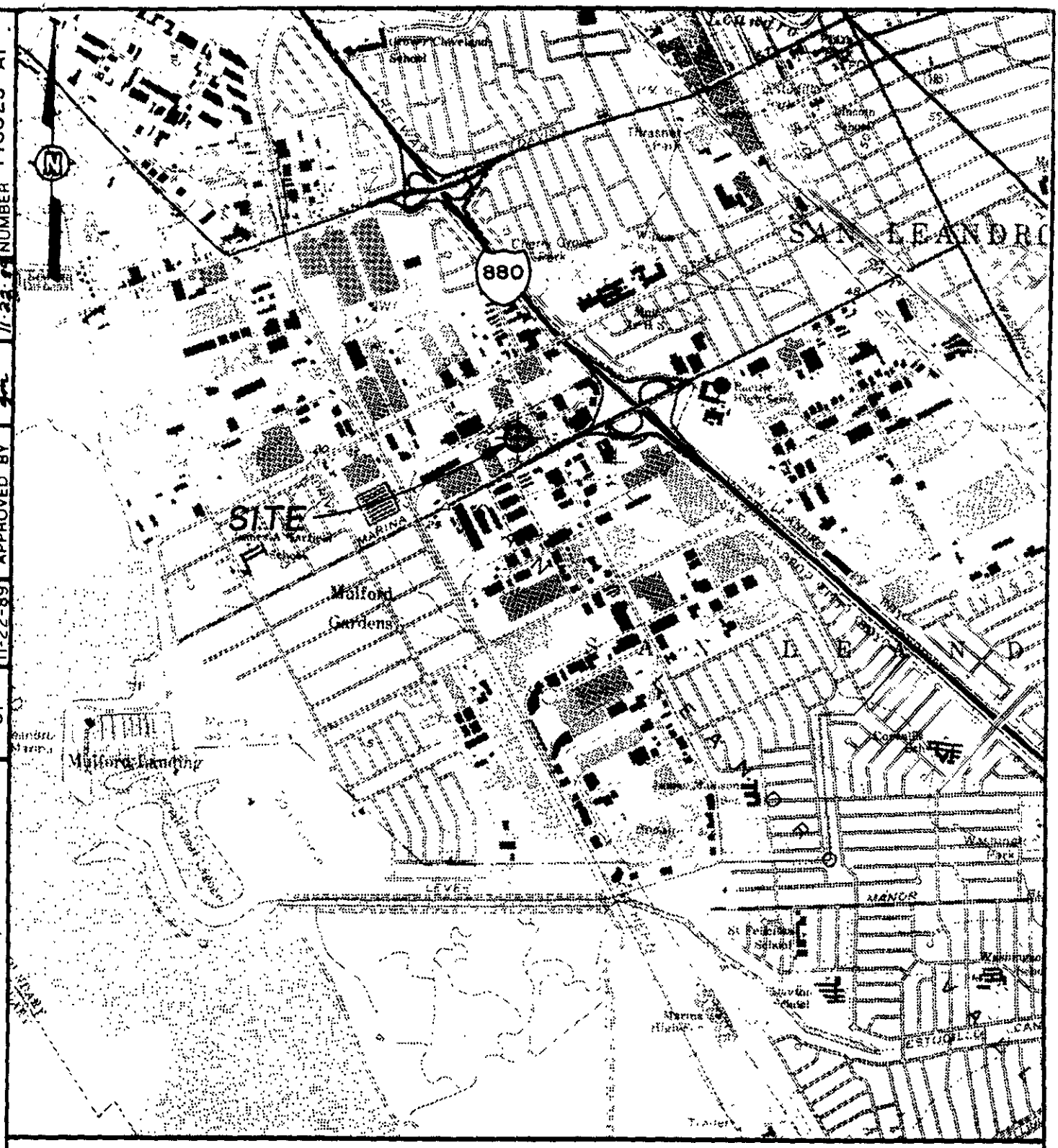
Ingersoll Rand

November 9,1990

TIME	PRESSURE READINGS -- INCHES OF WATER MONITORING WELLS			
MIN:SEC	MW-3	VW-2	VW-3	VW-4
0:10	0.30	0.37		
0:20	0.40	0.48		
0:30	0.45	0.54	0.27	
0:40			0.29	
0:45		0.60		
0:50			0.33	
1:00	0.55			0.06
1:15		0.67	0.39	
1:45	0.60	0.69		
2:00		0.69		0.13
2:15	0.60			0.14
2:30		0.72	0.46	
3:00	0.63		0.47	
3:15	0.63	0.74		0.18
3:30				0.19
3:45		0.75		
4:00	0.63		0.50	
4:30		0.76	0.51	0.20
4:45	0.64			
5:00		0.76		0.21
5:30	0.64		0.51	
5:45		0.76		
6:00				0.22
6:15	0.64			
6:30		0.77		
7:00			0.52	
7:30	0.65	0.77		0.23
8:30		0.76		
22:00	0.65		0.51	0.23
22:30		0.76		
30:00	-- VACUUM PRESSURE STEP DOWN --			
30:10	0.48	0.54		
30:20	0.43	0.49		
30:30	0.40	0.46	0.33	
30:45		0.44	0.32	
31:00	0.35		0.29	
31:15		0.40	0.28	
31:30	0.32			0.17
31:45		0.37	0.22	0.16
32:00				0.15
32:15	0.30		0.22	
32:30	0.30		0.21	0.13
32:45		0.34	0.22	
33:00	0.30			
33:30		0.34		
34:00	0.29			0.11
34:30	0.29			
35:00		0.33	0.21	0.11
35:45		0.33		
39:00			0.21	0.11
43:00	0.29			
43:30		0.32		

FIGURES

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
TRS 11-22-89	SM		148025-A1



SCALE

0 2000 4000 FEET

FIGURE 1

SITE VICINITY MAP

PREPARED FOR

INGERSOLL-RAND
1944 MARINA BLVD.
SAN LEANDRO, CALIFORNIA

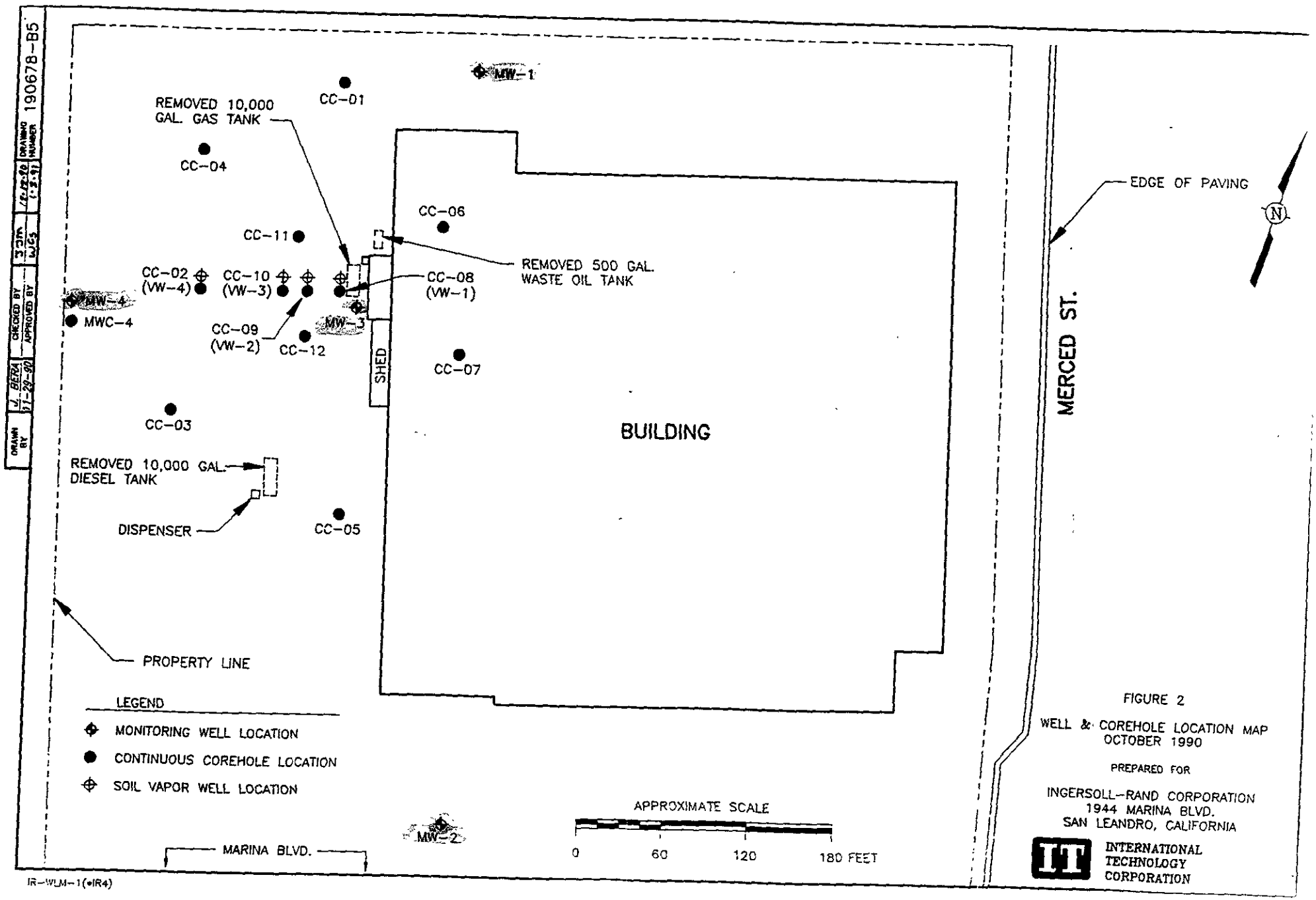
REFERENCE

U.S.G.S. 7.5' MIN. TOPOGRAPHY, SAN LEANDRO, CALIFORNIA QUADRANGLE; DATED 1959 PHOTOREVISED 1980
SCALE = 1:24000

INTERNATIONAL TECHNOLOGY CORPORATION

146494

Do Not Scale This Drawing


190678-B5
DRAWING NUMBER
DRAWN BY
J. BERA
11-29-90
CHECKED BY
APPROVED BY
MW-1
CC-01
REMOVED 10,000 GAL. GAS TANK
CC-04
CC-06
CC-11
REMOVED 500 GAL. WASTE OIL TANK
CC-02 (VW-4)
CC-10 (VW-3)
CC-08 (VW-1)
MW-4
MWC-4
CC-09 (VW-2)
CC-12
MW-3
SHED
CC-07
CC-03
BUILDING
REMOVED 10,000 GAL. DIESEL TANK
DISPENSER
CC-05
PROPERTY LINE
LEGEND
MONITORING WELL LOCATION
CONTINUOUS COREHOLE LOCATION
SOIL VAPOR WELL LOCATION
MW-2
MARINA BLVD.
APPROXIMATE SCALE
0
60
120
180 FEET
EDGE OF PAVING
MERCED ST.
N
FIGURE 2
WELL & COREHOLE LOCATION MAP
OCTOBER 1990
PREPARED FOR
INGERSOLL-RAND CORPORATION
1944 MARINA BLVD.
SAN LEANDRO, CALIFORNIA
INTERNATIONAL TECHNOLOGY CORPORATION

IR-WLM-1(•IR4)

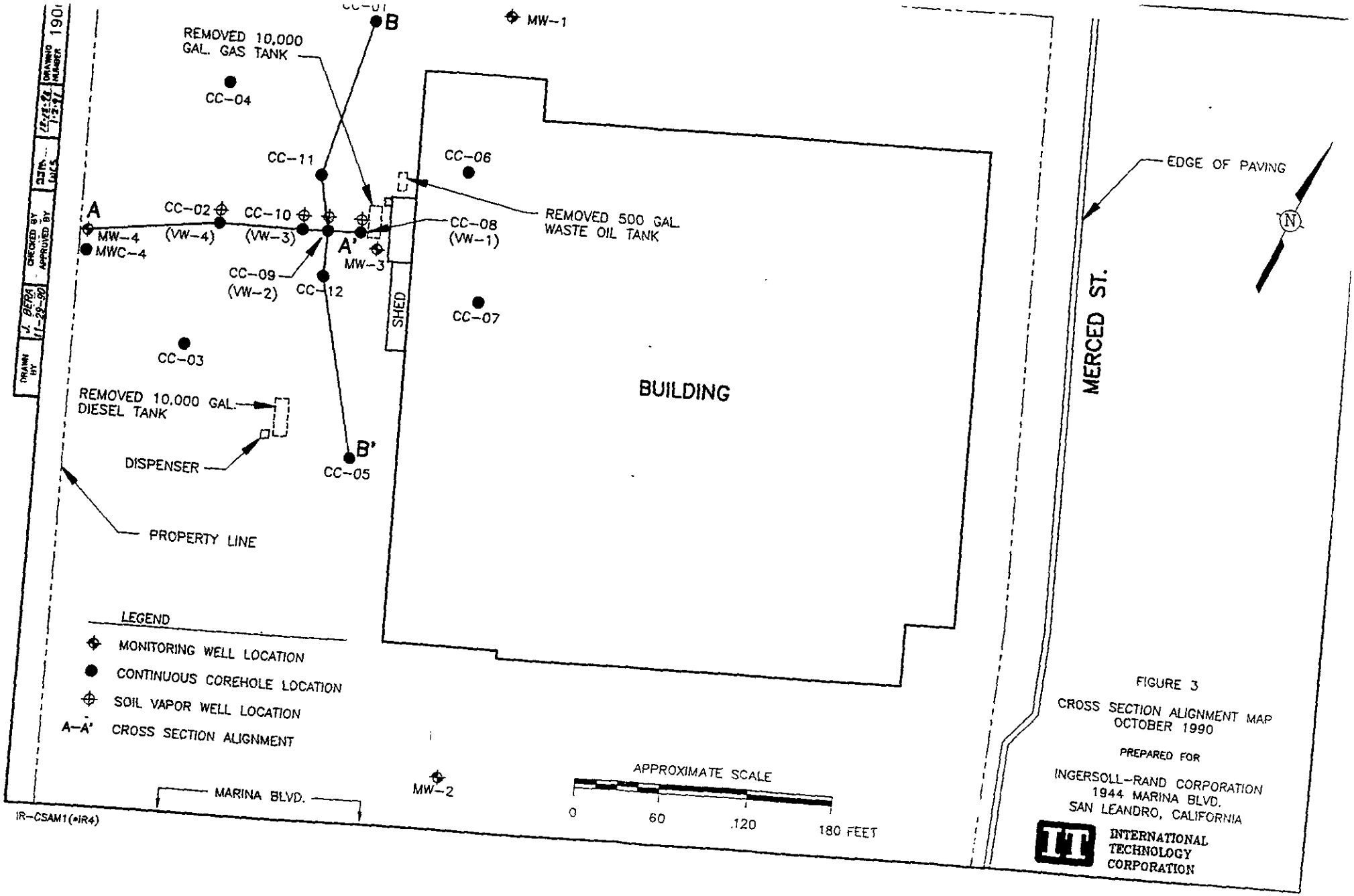


FIGURE 3

CROSS SECTION ALIGNMENT MAP
OCTOBER 1990

PREPARED FOR

INGERSOLL-RAND CORPORATION
1944 MARINA BLVD.
SAN LEANDRO, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

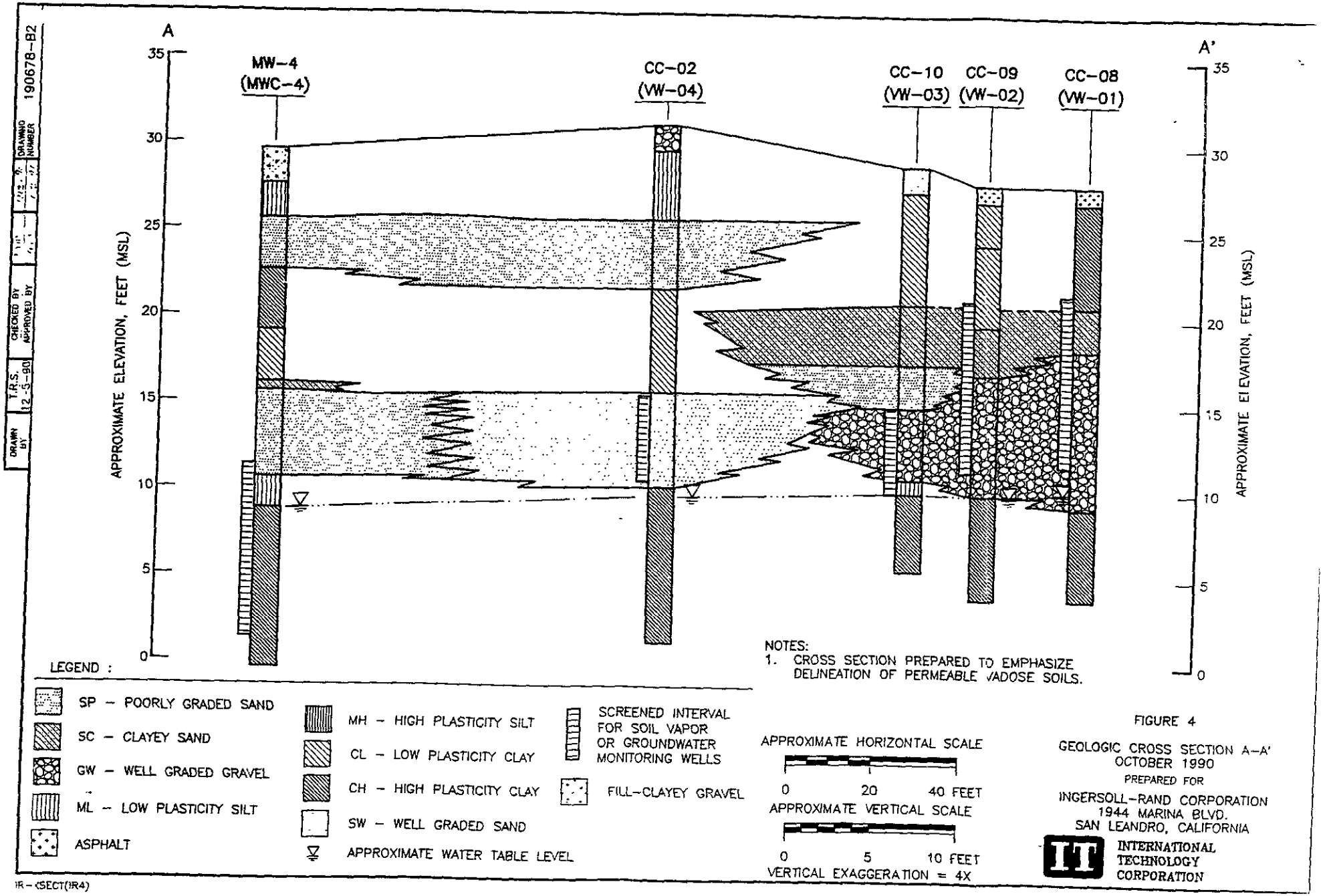


FIGURE 4

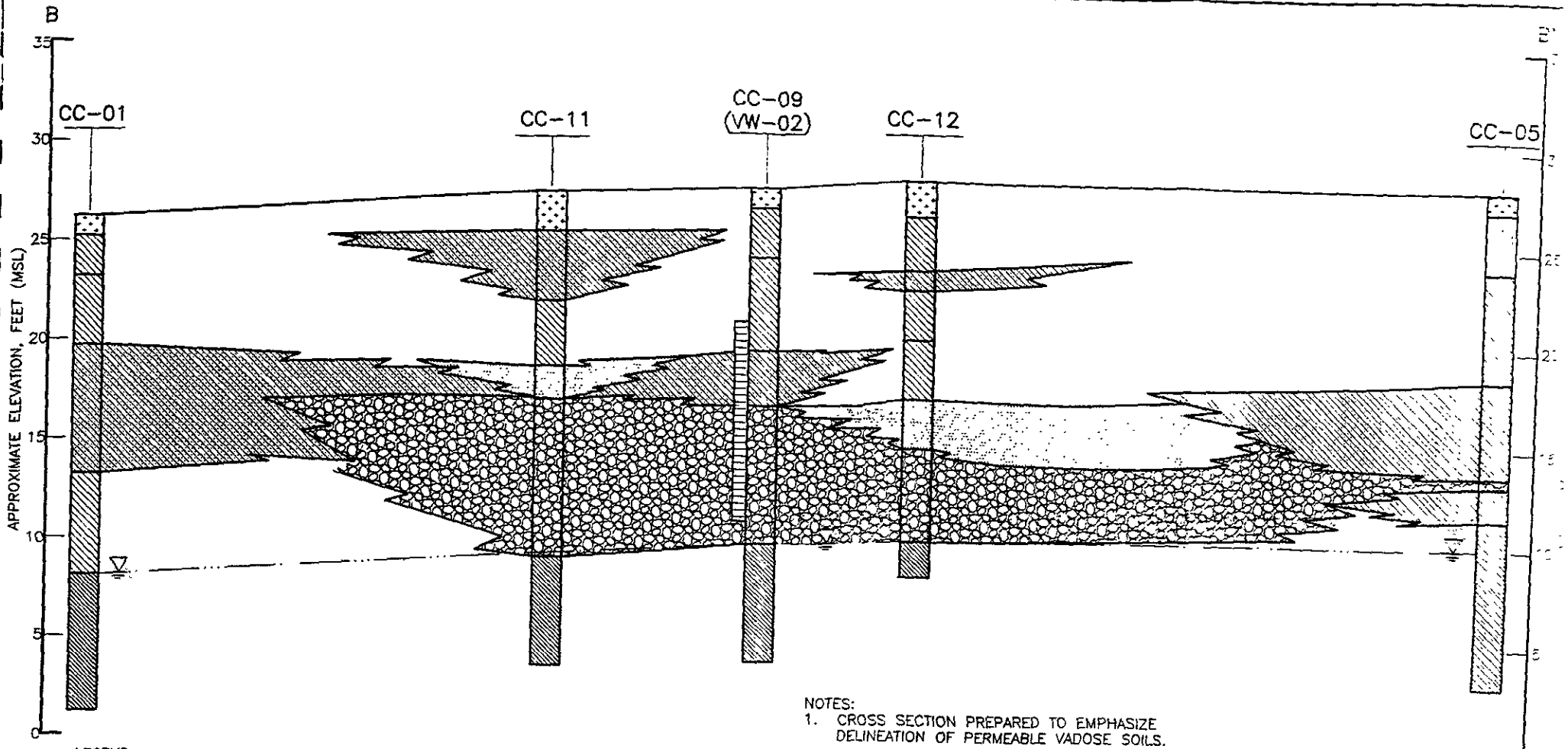
GEOLOGIC CROSS SECTION A-A'
OCTOBER 1990

PREPARED FOR

INGERSOLL-RAND CORPORATION
1944 MARINA BLVD.
SAN LEANDRO, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

IR - <SECT(IR4)



NOTES:
1. CROSS SECTION PREPARED TO EMPHASIZE DELINEATION OF PERMEABLE VADOSE SOILS.

LEGEND :

- SP – POORLY GRADED SAND
- SC – CLAYEY SAND
- GW – WELL GRADED GRAVEL
- ASPHALT
- ML – LOW PLASTICITY SILT
- MH – HIGH PLASTICITY SILT
- CL – LOW PLASTICITY CLAY
- CH – HIGH PLASTICITY CLAY
- APPROXIMATE WATER TABLE LEVEL
- SCREENED INTERVAL FOR SOIL VAPOR OR GROUNDWATER MONITORING WELLS

APPROXIMATE HORIZONTAL SCALE

0 20 40 FEET

APPORXIMATE VERTICAL SCALE

0 5 10 FEET

VERTICAL EXAGGERATION = 4X

FIGURE 5

GEOLOGIC CROSS SECTION B–B'
OCTOBER 1990

PREPARED FOR

INGERSOLL–RAND CORPORATION
1944 MARINA BLVD.
SAN LEANDRO, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

IR-SECTB(IR5)

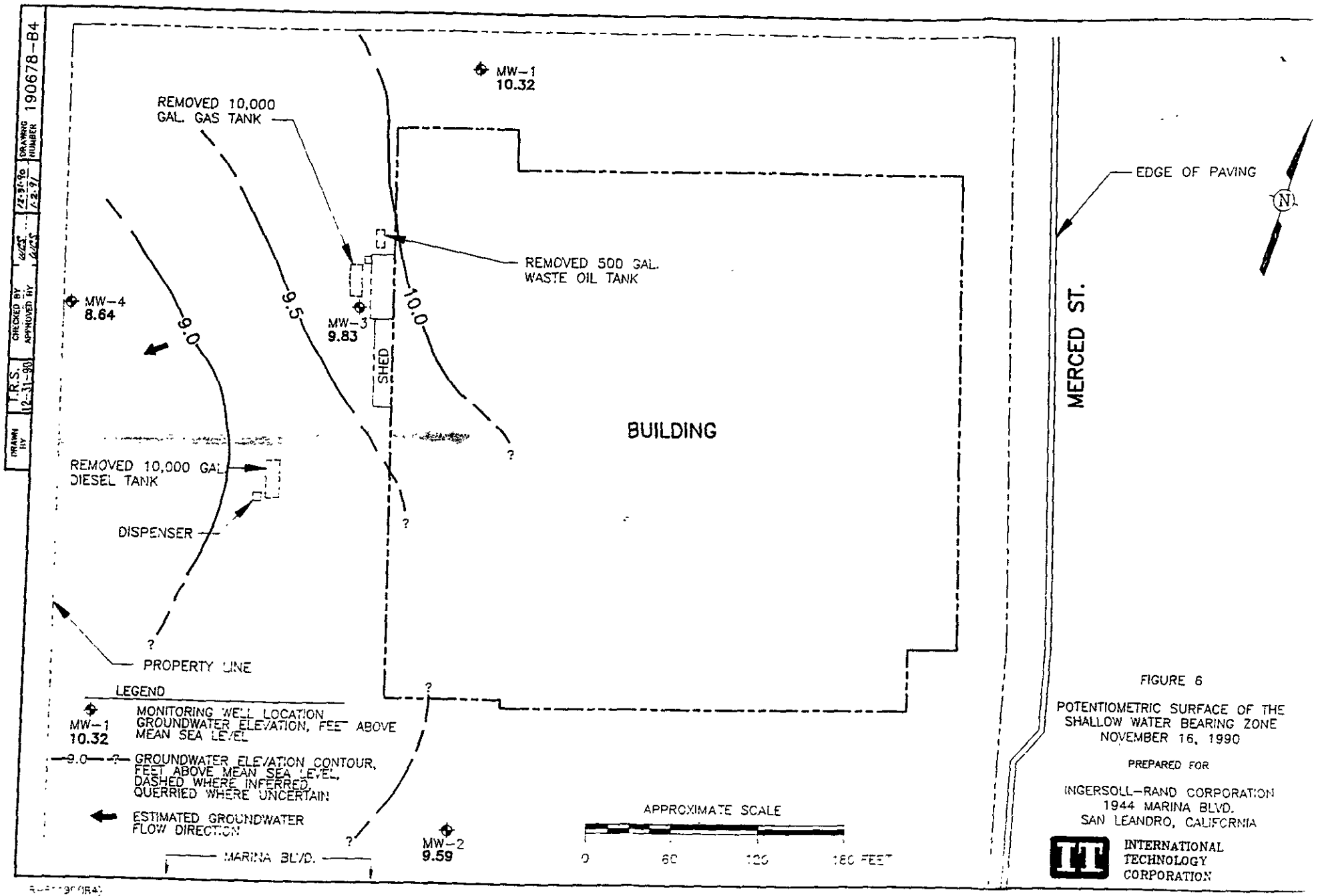


FIGURE 6

POTENTIOMETRIC SURFACE OF THE SHALLOW WATER BEARING ZONE NOVEMBER 16, 1990

PREPARED FOR

INGERSOLL-RAND CORPORATION
1944 MARINA BLVD.
SAN LEANDRO, CALIFORNIA

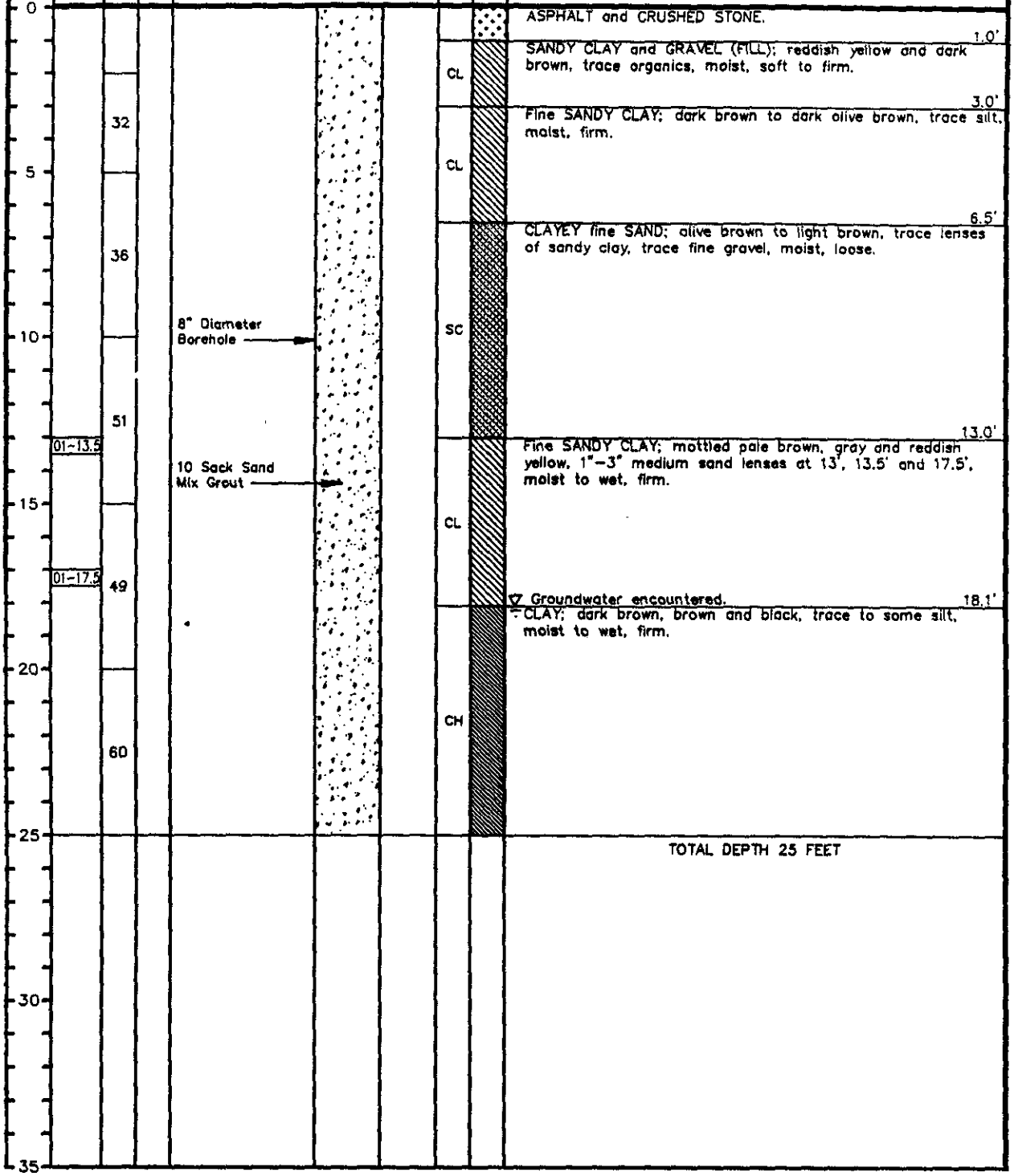
INTERNATIONAL TECHNOLOGY CORPORATION

APPENDIX A

BOREHOLE LOGS AND WELL CONSTRUCTION RECORDS

BORING NO. CC-01

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-22-90
APPROVED BY G. Reid — DATE FINISHED 10-22-90
TOTAL DEPTH 25 ft — GROUND SURFACE EL. approx. 26.2



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

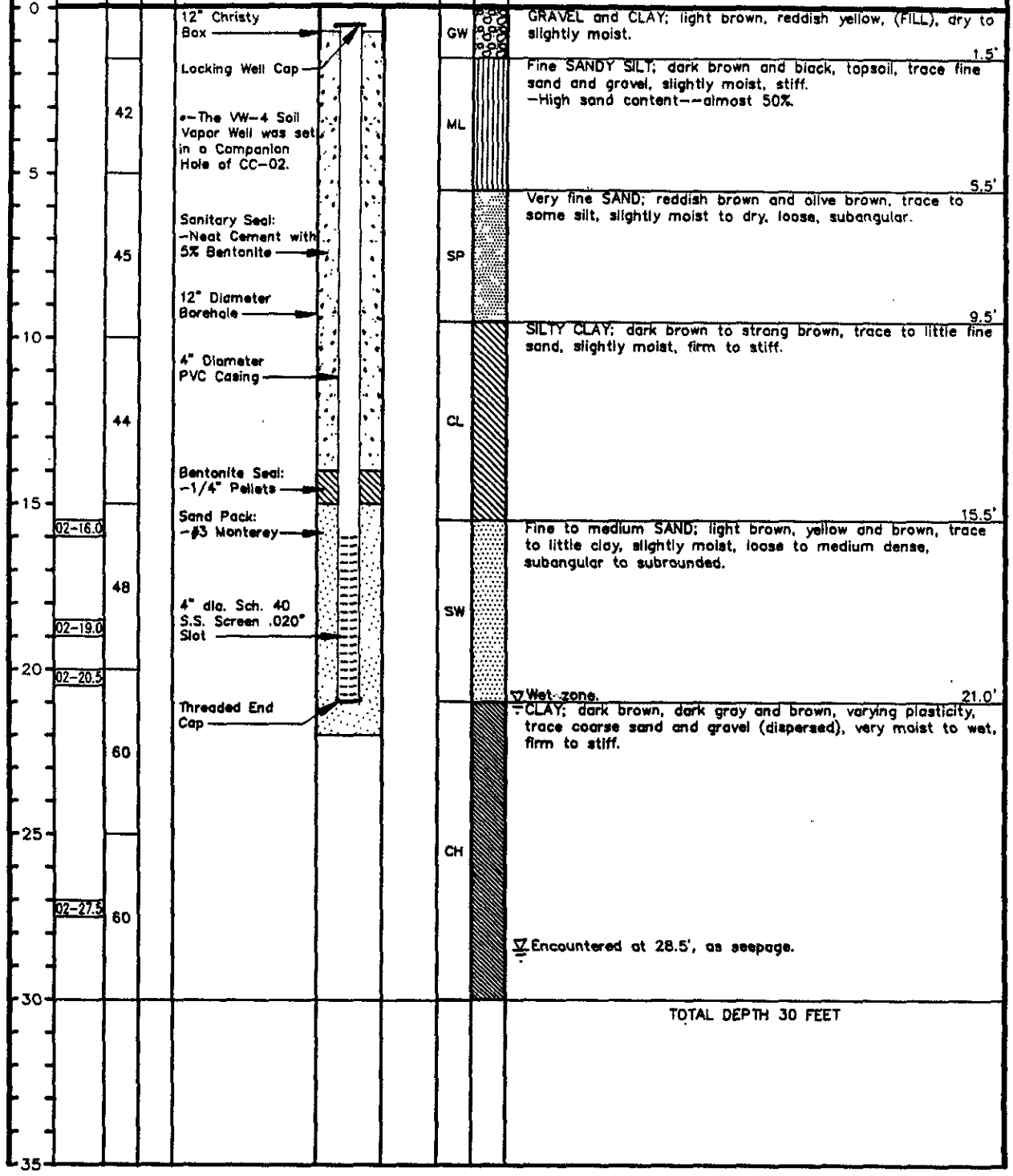
IR-CC-01(*IR2)

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-02(VW-4)

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-22-90
APPROVED BY G. Reid — DATE FINISHED 10-22-90
TOTAL DEPTH 30 ft — GROUND SURFACE EL. approx. 31.1'



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger – 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

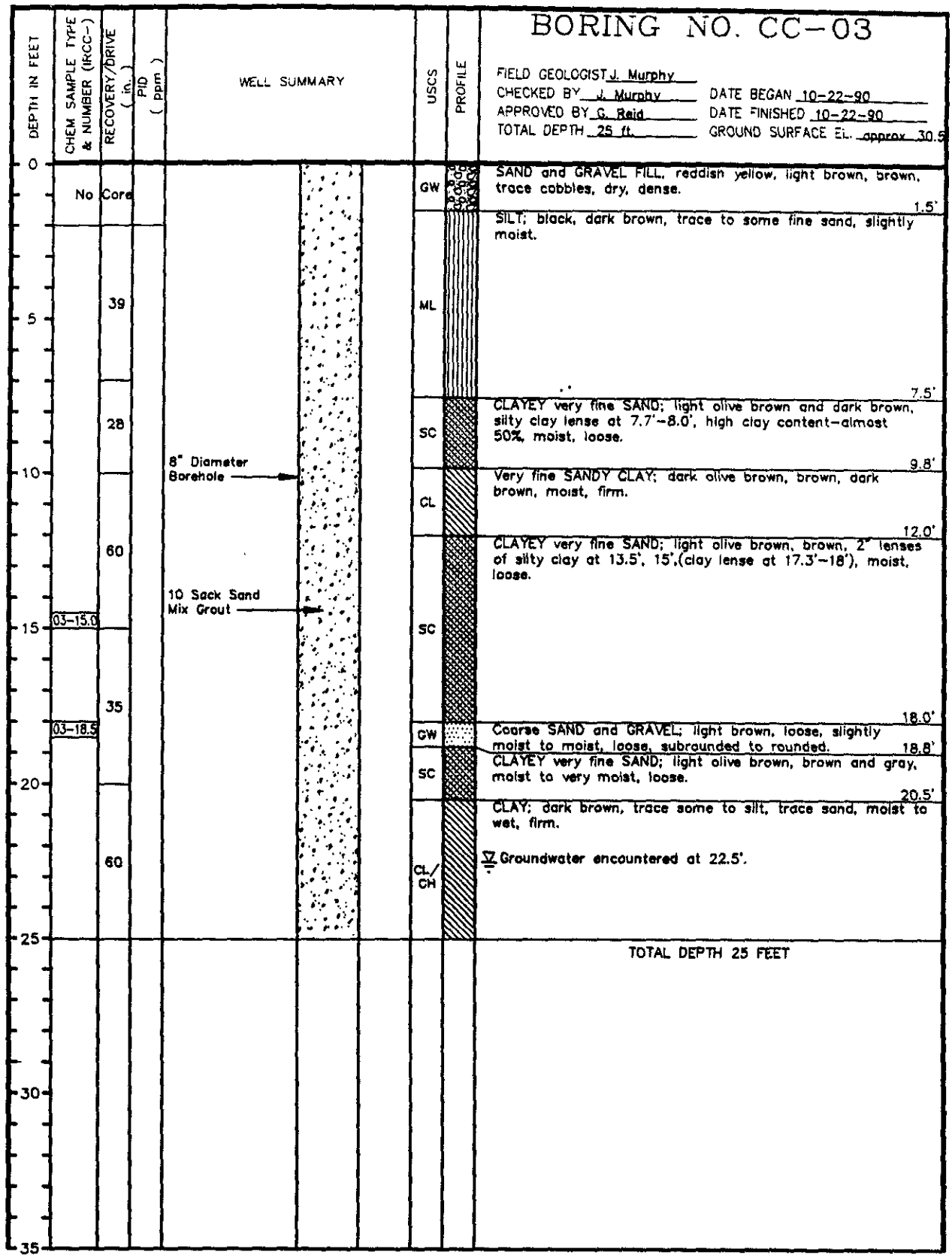
PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

IR-CC-02(#R3)

BORING NO. CC-03

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-22-90
APPROVED BY G. Reid — DATE FINISHED 10-22-90
TOTAL DEPTH 25 ft. — GROUND SURFACE EL. approx 30.5



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

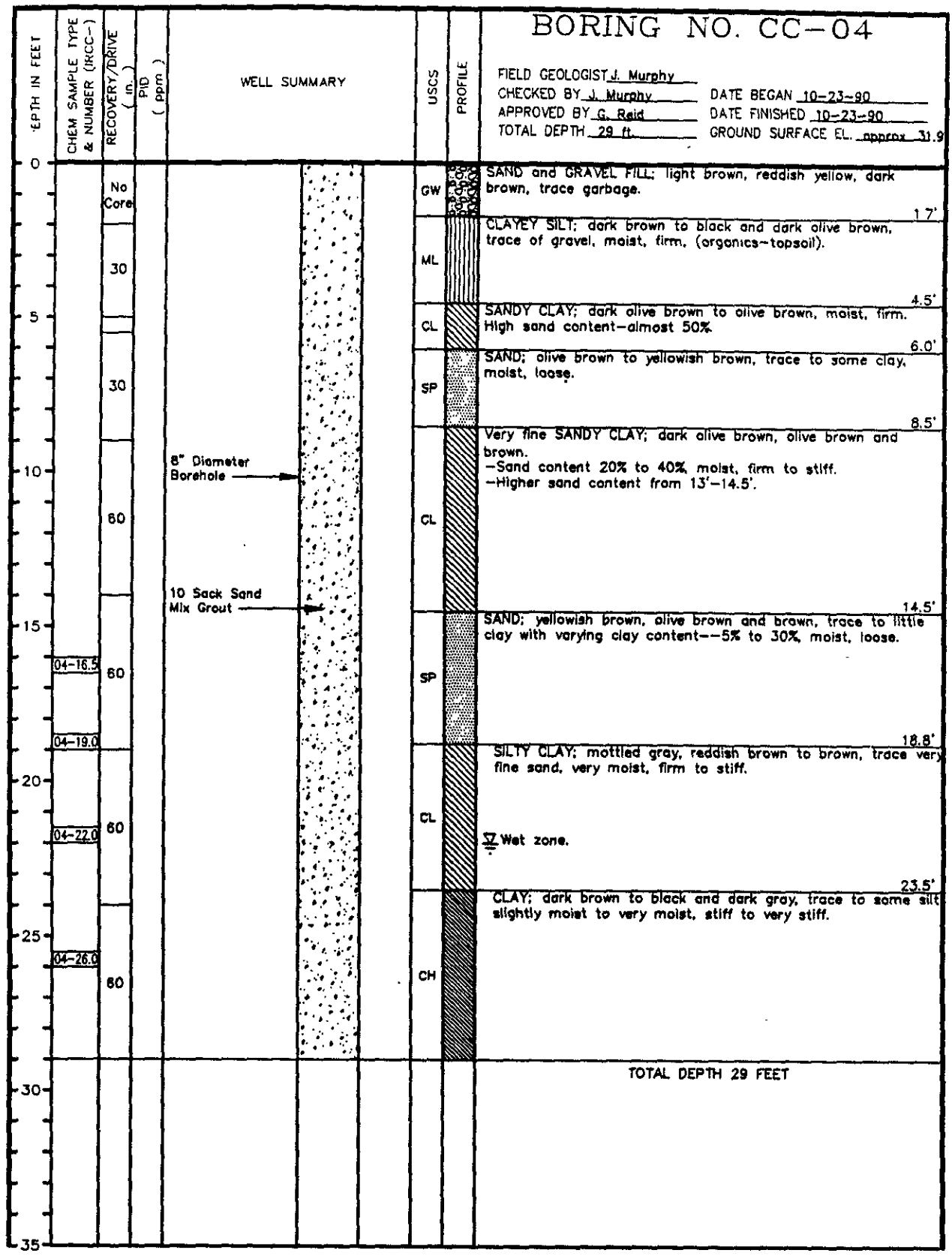
IR-CC-03(*R2)

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-04

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-23-90
APPROVED BY G. Reid — DATE FINISHED 10-23-90
TOTAL DEPTH 29 ft. — GROUND SURFACE EL. approx 31.9



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

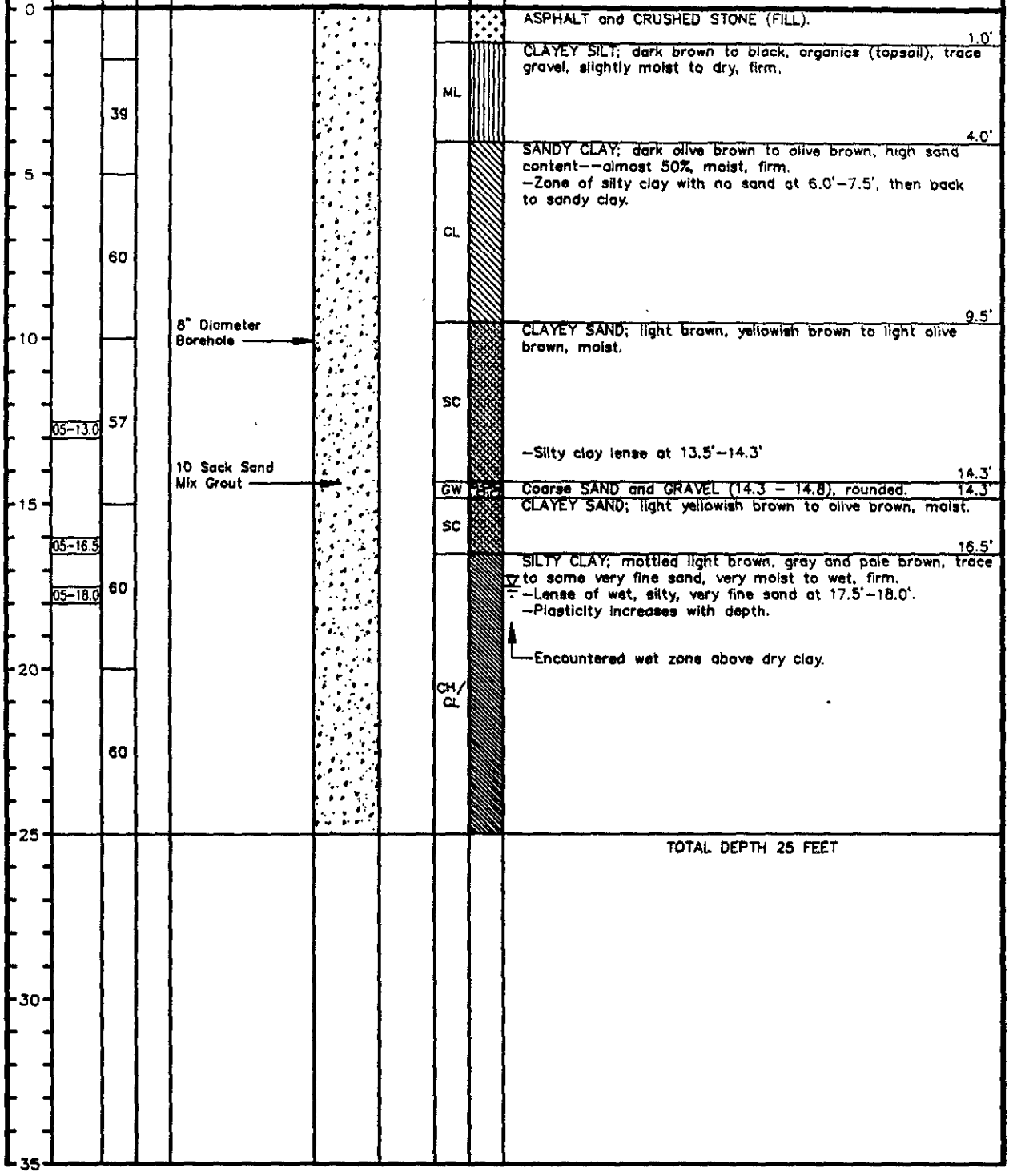
PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

IR-CC-04(nR2)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-05

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-23-90
APPROVED BY G. Reid — DATE FINISHED 10-23-90
TOTAL DEPTH 25 ft. — GROUND SURFACE EL. approx. 28.0'



ASPHALT and CRUSHED STONE (FILL). 1.0'

CLAYEY SILT; dark brown to black, organics (topsoil), trace gravel, slightly moist to dry, firm. 4.0'

SANDY CLAY; dark olive brown to olive brown, high sand content--almost 50%, moist, firm.
-Zone of silty clay with no sand at 6.0'-7.5', then back to sandy clay. 9.5'

CLAYEY SAND; light brown, yellowish brown to light olive brown, moist.
-Silty clay lense at 13.5'-14.3' 14.3'

Coarse SAND and GRAVEL (14.3 - 14.8), rounded. 14.3'

CLAYEY SAND; light yellowish brown to olive brown, moist. 16.5'

SILTY CLAY; mottled light brown, gray and pale brown, trace to some very fine sand, very moist to wet, firm.
-Lense of wet, silty, very fine sand at 17.5'-18.0'.
-Plasticity increases with depth.
-Encountered wet zone above dry clay.

TOTAL DEPTH 25 FEET

DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

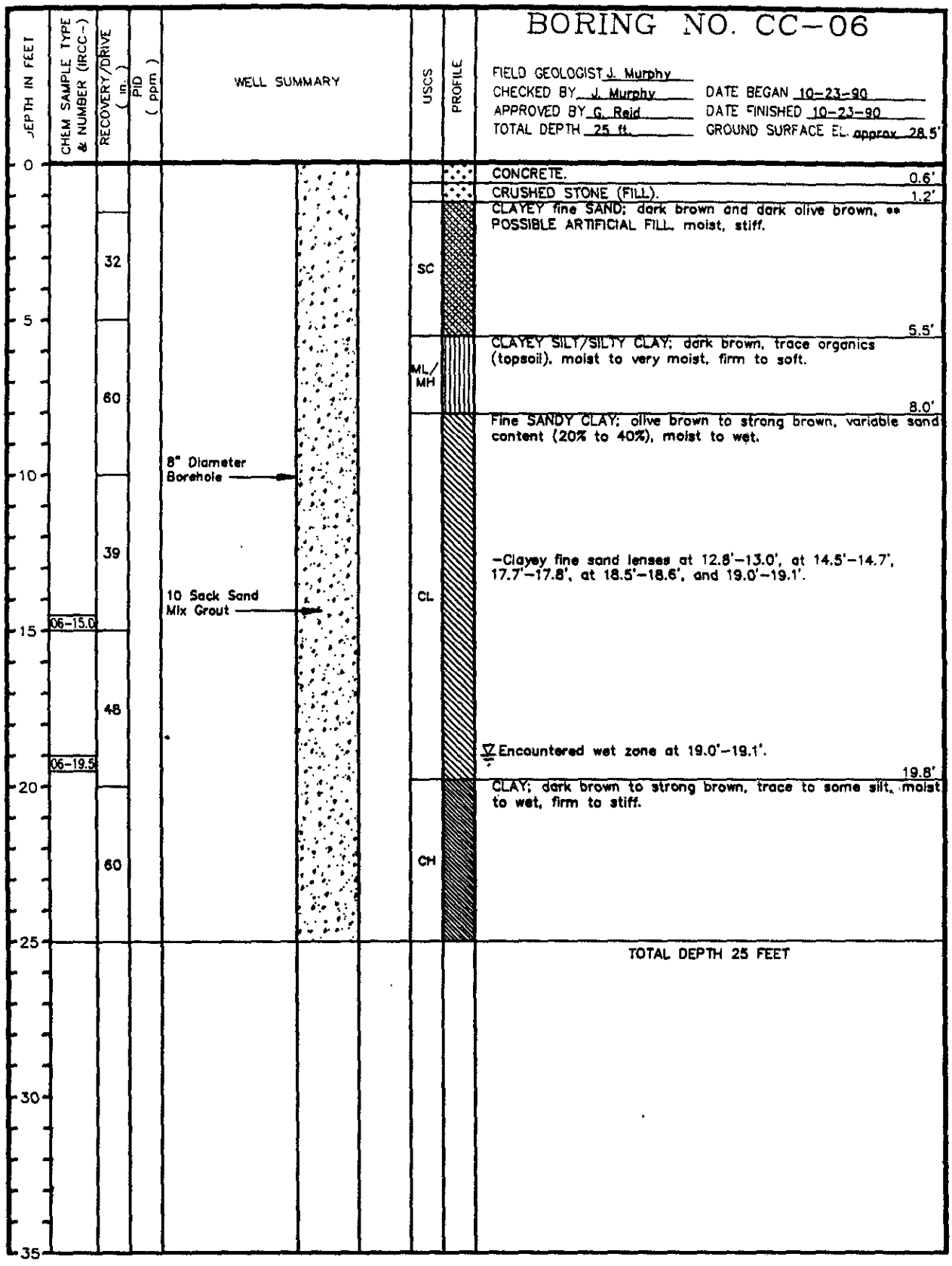
SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

IR-CC-05(#R2)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-06

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-23-90
APPROVED BY G. Reid — DATE FINISHED 10-23-90
TOTAL DEPTH 25 ft. — GROUND SURFACE EL. approx. 28.5'



CONCRETE. 0.6'

CRUSHED STONE (FILL). 1.2'

CLAYEY fine SAND; dark brown and dark olive brown, ** POSSIBLE ARTIFICIAL FILL, moist, stiff. 5.5'

CLAYEY SILT/SILTY CLAY; dark brown, trace organics (topsoil), moist to very moist, firm to soft. 8.0'

Fine SANDY CLAY; olive brown to strong brown, variable sand content (20% to 40%), moist to wet.

-Clayey fine sand lenses at 12.8'-13.0', at 14.5'-14.7', 17.7'-17.8', at 18.5'-18.6', and 19.0'-19.1'.

▽ Encountered wet zone at 19.0'-19.1'. 19.8'

CLAY; dark brown to strong brown, trace to some silt, moist to wet, firm to stiff.

TOTAL DEPTH 25 FEET

DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

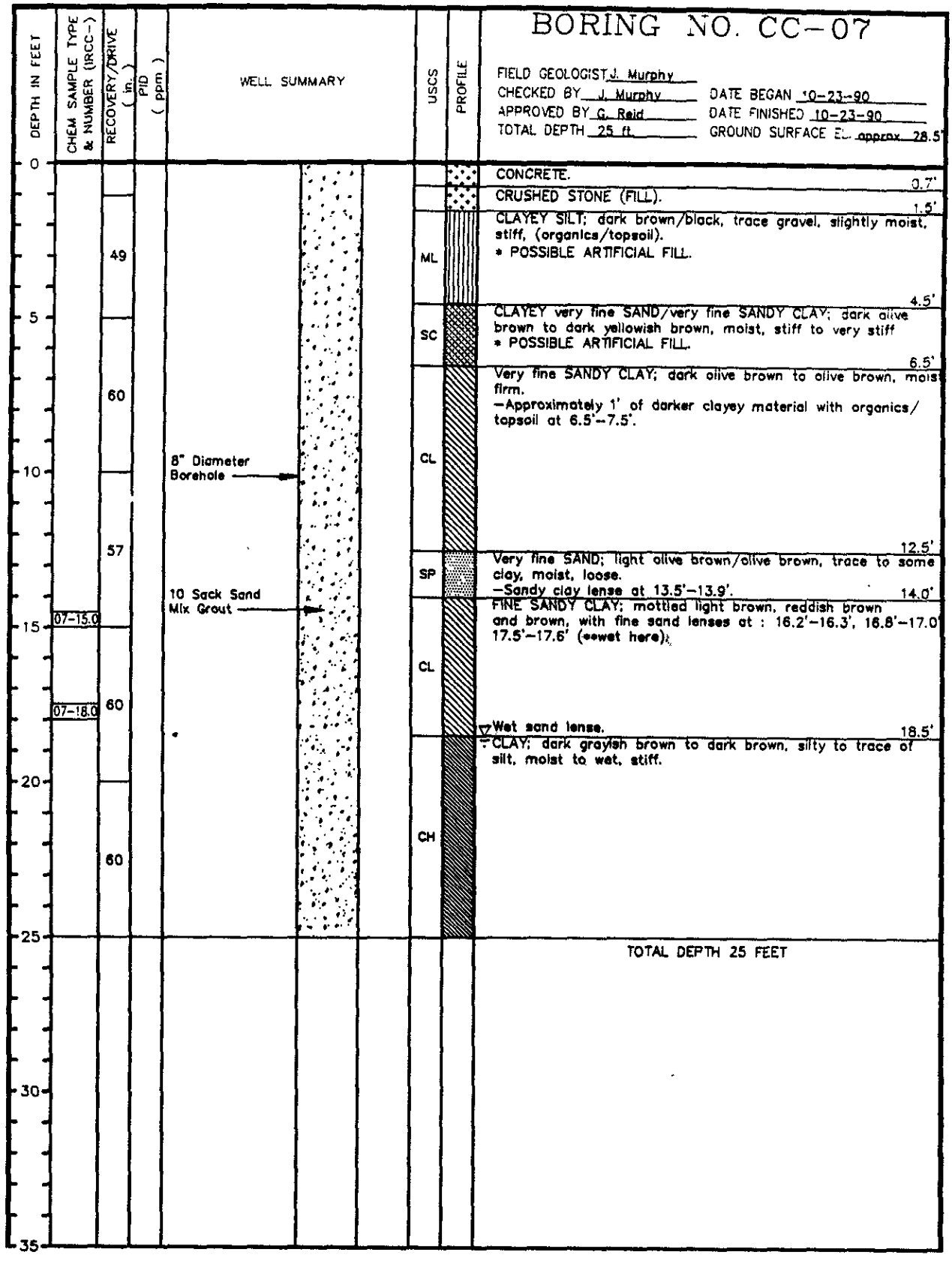
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

IR-CC-06(#R2)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-07

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-23-90
APPROVED BY G. Reid — DATE FINISHED 10-23-90
TOTAL DEPTH 25 ft. — GROUND SURFACE EL. approx. 28.5'



CONCRETE. 0.7'
CRUSHED STONE (FILL). 1.5'
CLAYEY SILT; dark brown/black, trace gravel, slightly moist, stiff, (organics/topsoil).
* POSSIBLE ARTIFICIAL FILL.
4.5'
CLAYEY very fine SAND/very fine SANDY CLAY; dark olive brown to dark yellowish brown, moist, stiff to very stiff
* POSSIBLE ARTIFICIAL FILL.
6.5'
Very fine SANDY CLAY; dark olive brown to olive brown, moist firm.
—Approximately 1' of darker clayey material with organics/ topsoil at 6.5'–7.5'.
12.5'
Very fine SAND; light olive brown/olive brown, trace to some clay, moist, loose.
—Sandy clay lense at 13.5'–13.9'.
14.0'
FINE SANDY CLAY; mottled light brown, reddish brown and brown, with fine sand lenses at : 16.2'–16.3', 16.8'–17.0' 17.5'–17.6' (**wet here).
▽Wet sand lense.
18.5'
CLAY; dark grayish brown to dark brown, silty to trace of silt, moist to wet, stiff.
TOTAL DEPTH 25 FEET

DRILLING CO.: Water Development Corporation
DRILL METHOD: 3–1/4" I.D. Hollow Stem Auger – 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

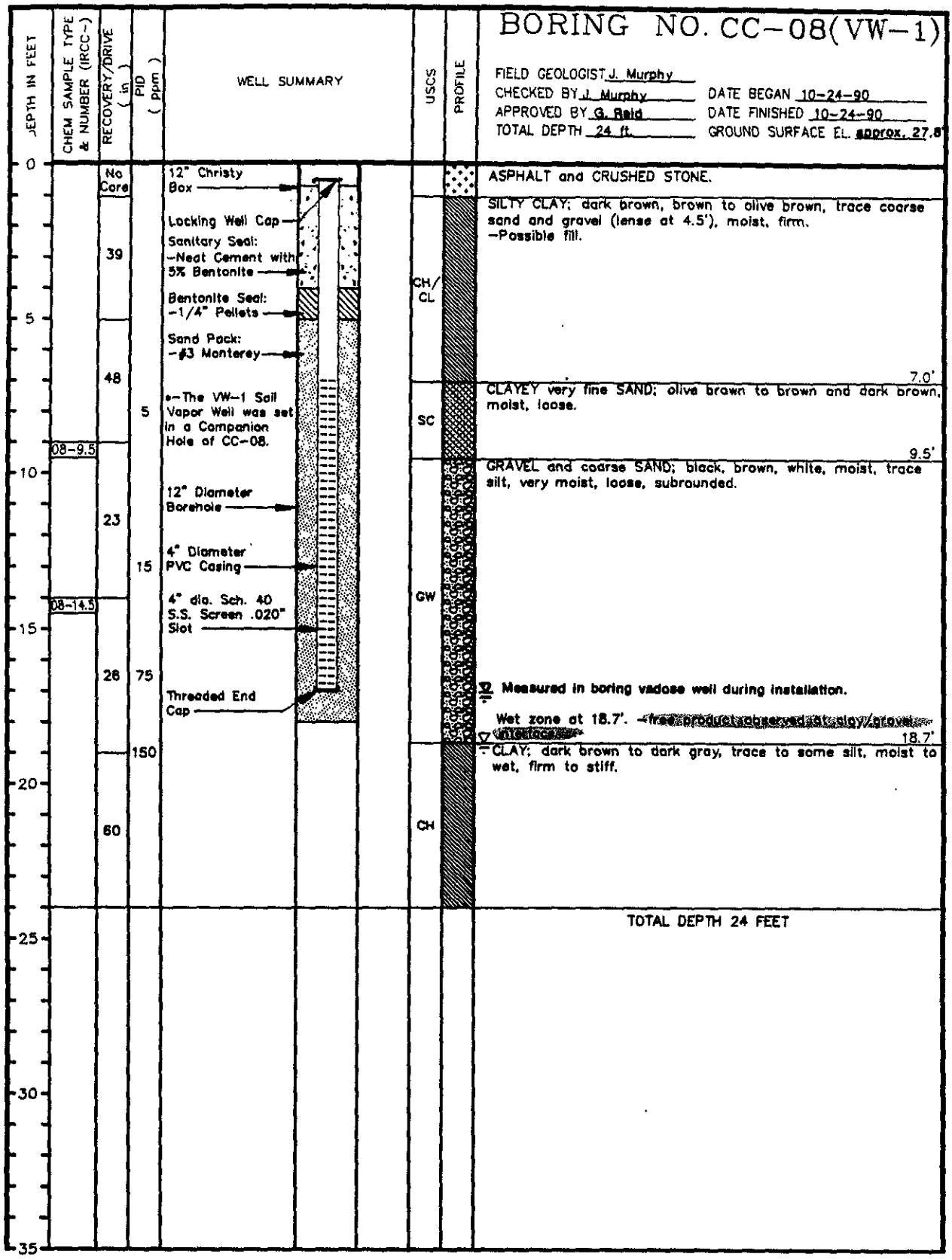
PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

IR-CC-07(eIR2)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-08(VW-1)

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-24-90
APPROVED BY G. Reid — DATE FINISHED 10-24-90
TOTAL DEPTH 24 ft. — GROUND SURFACE EL. approx. 27.8'



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger – 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PAGE 1 OF 1

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

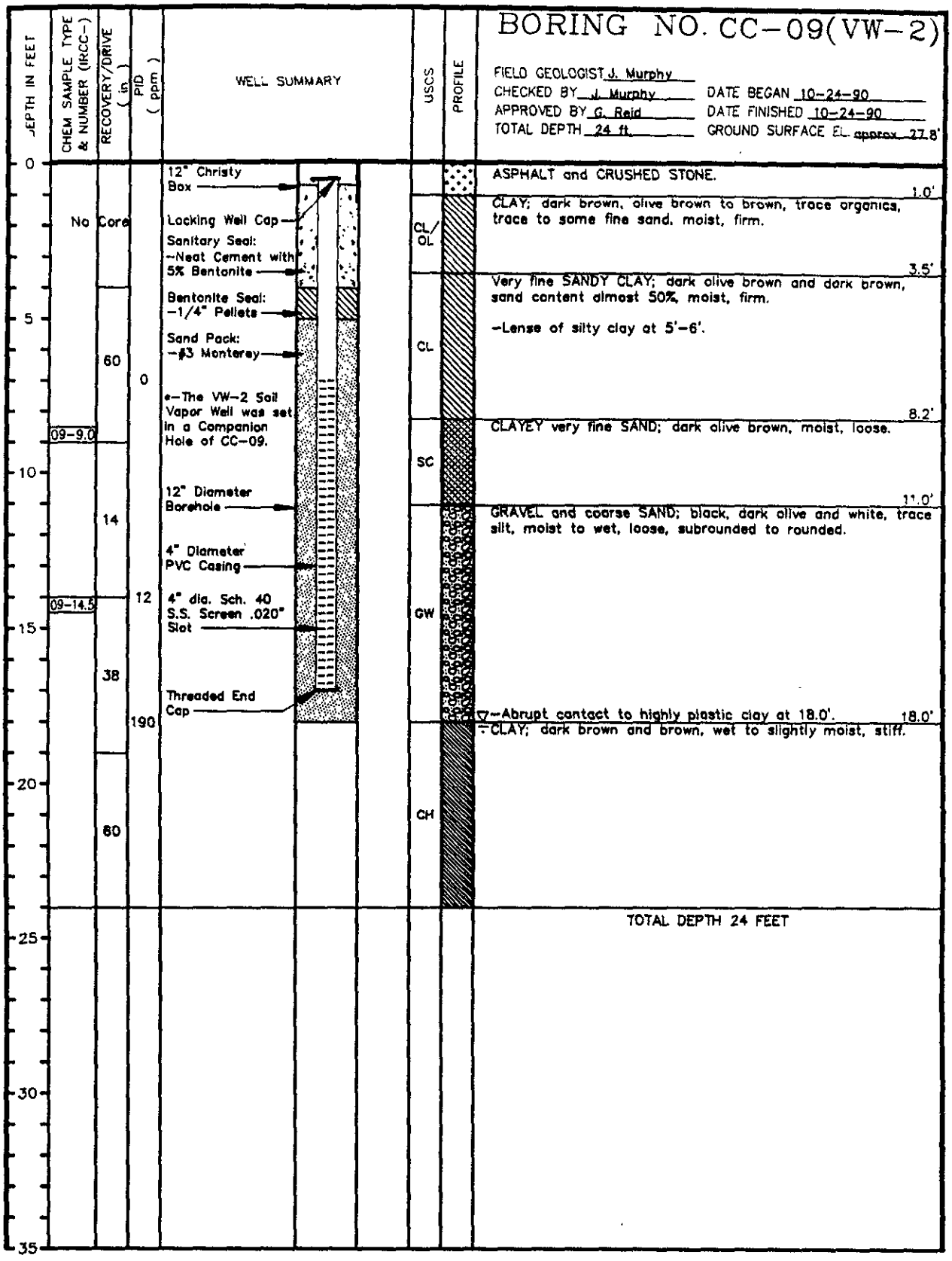
PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

(R-CC-08(+IR3)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-09(VW-2)

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-24-90
APPROVED BY G. Reid — DATE FINISHED 10-24-90
TOTAL DEPTH 24 ft — GROUND SURFACE EL. approx 27.8'



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger — 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

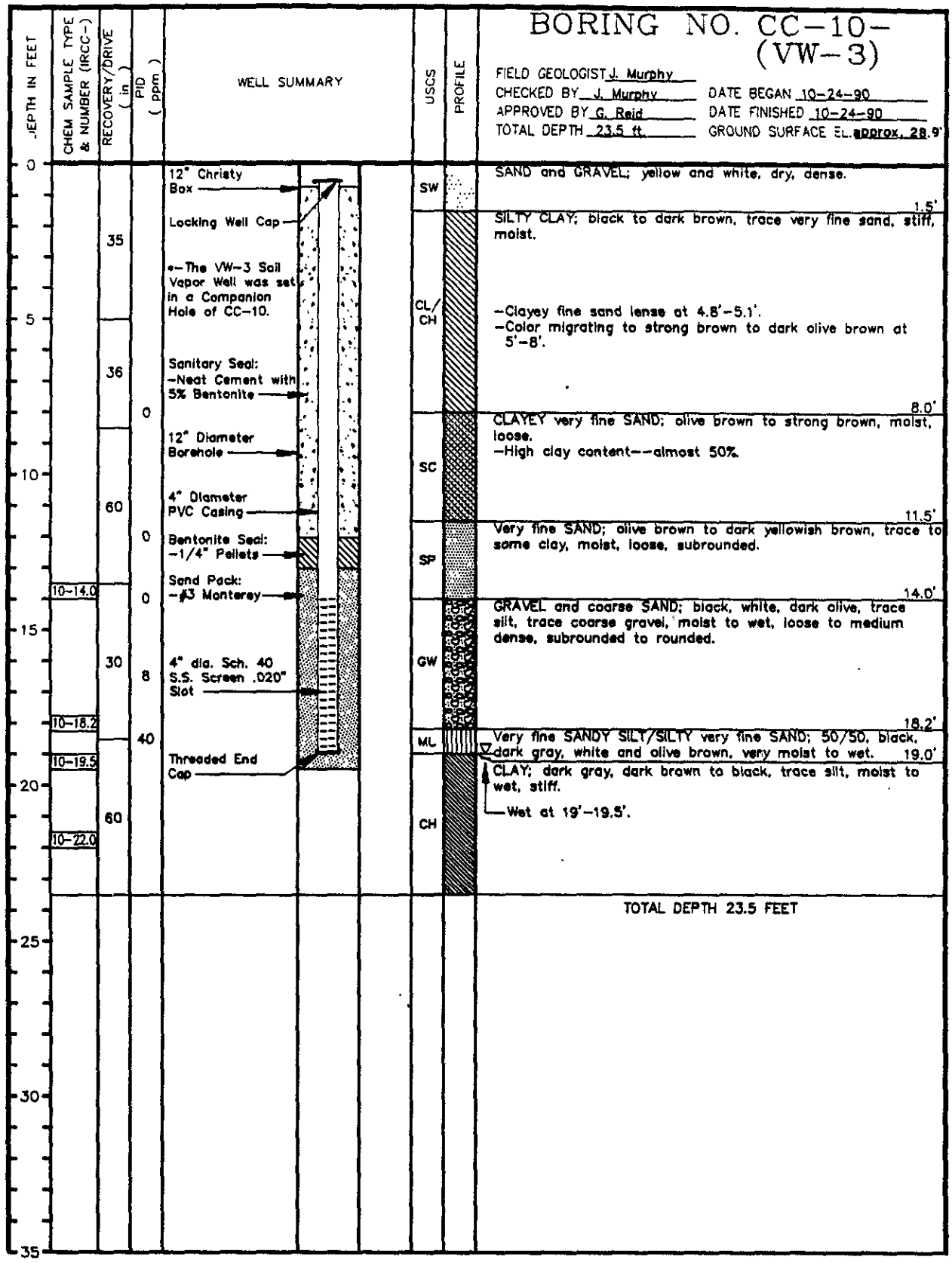
PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-10-(VW-3)

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-24-90
APPROVED BY G. Reid — DATE FINISHED 10-24-90
TOTAL DEPTH 23.5 ft. — GROUND SURFACE EL. approx. 28.9'



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

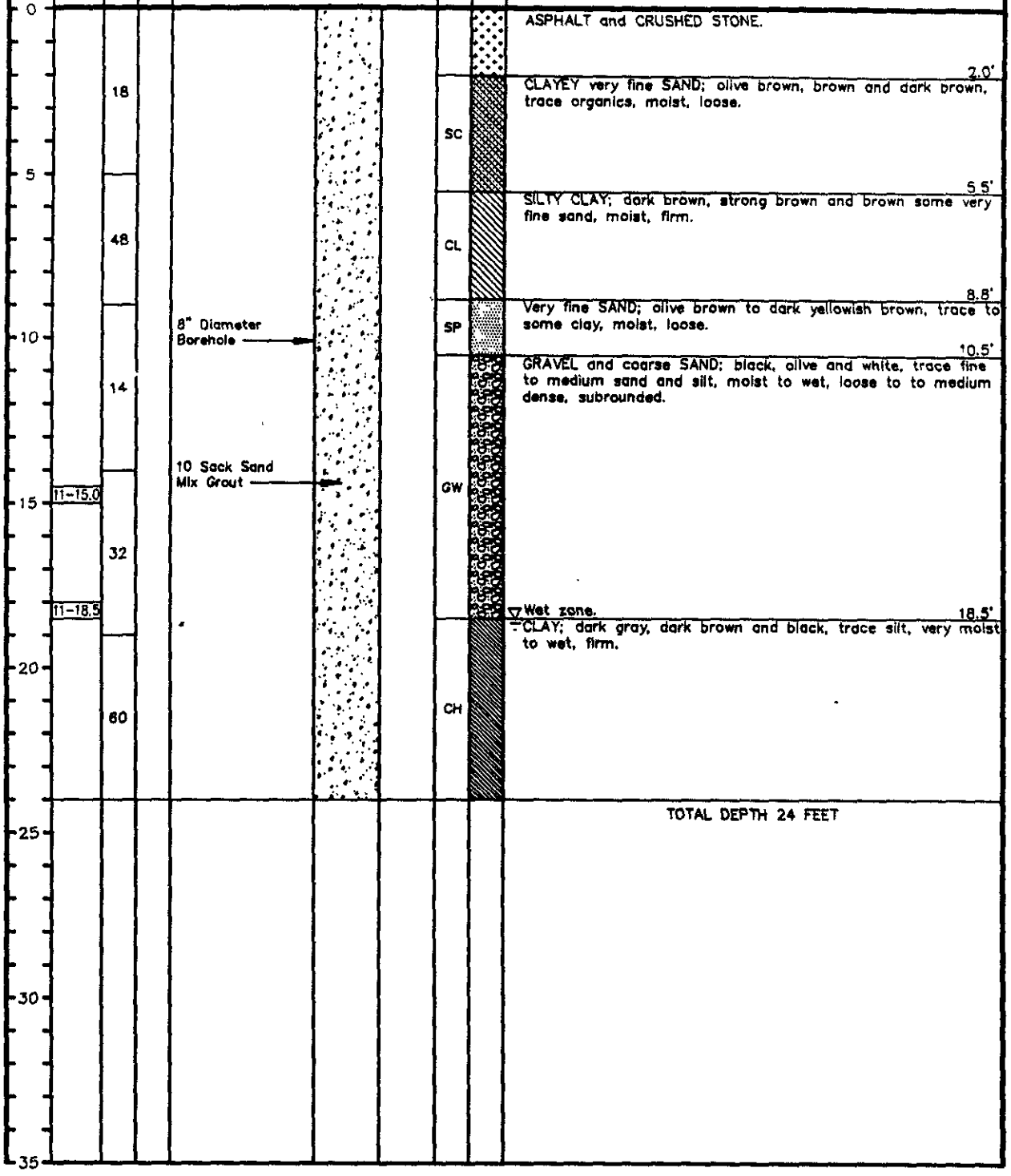
SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

IR-CC-10(*IR3)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-11

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-24-90
APPROVED BY G. Reid — DATE FINISHED 10-24-90
TOTAL DEPTH 24 ft. — GROUND SURFACE EL. approx. 27.4



ASPHALT and CRUSHED STONE.

2.0'

CLAYEY very fine SAND; olive brown, brown and dark brown, trace organics, moist, loose.

5.5'

SILTY CLAY; dark brown, strong brown and brown some very fine sand, moist, firm.

8.8'

Very fine SAND; olive brown to dark yellowish brown, trace to some clay, moist, loose.

10.5'

GRAVEL and coarse SAND; black, olive and white, trace fine to medium sand and silt, moist to wet, loose to to medium dense, subrounded.

▽Wet zone. 18.5'

CLAY; dark gray, dark brown and black, trace silt, very moist to wet, firm.

TOTAL DEPTH 24 FEET

DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger — 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

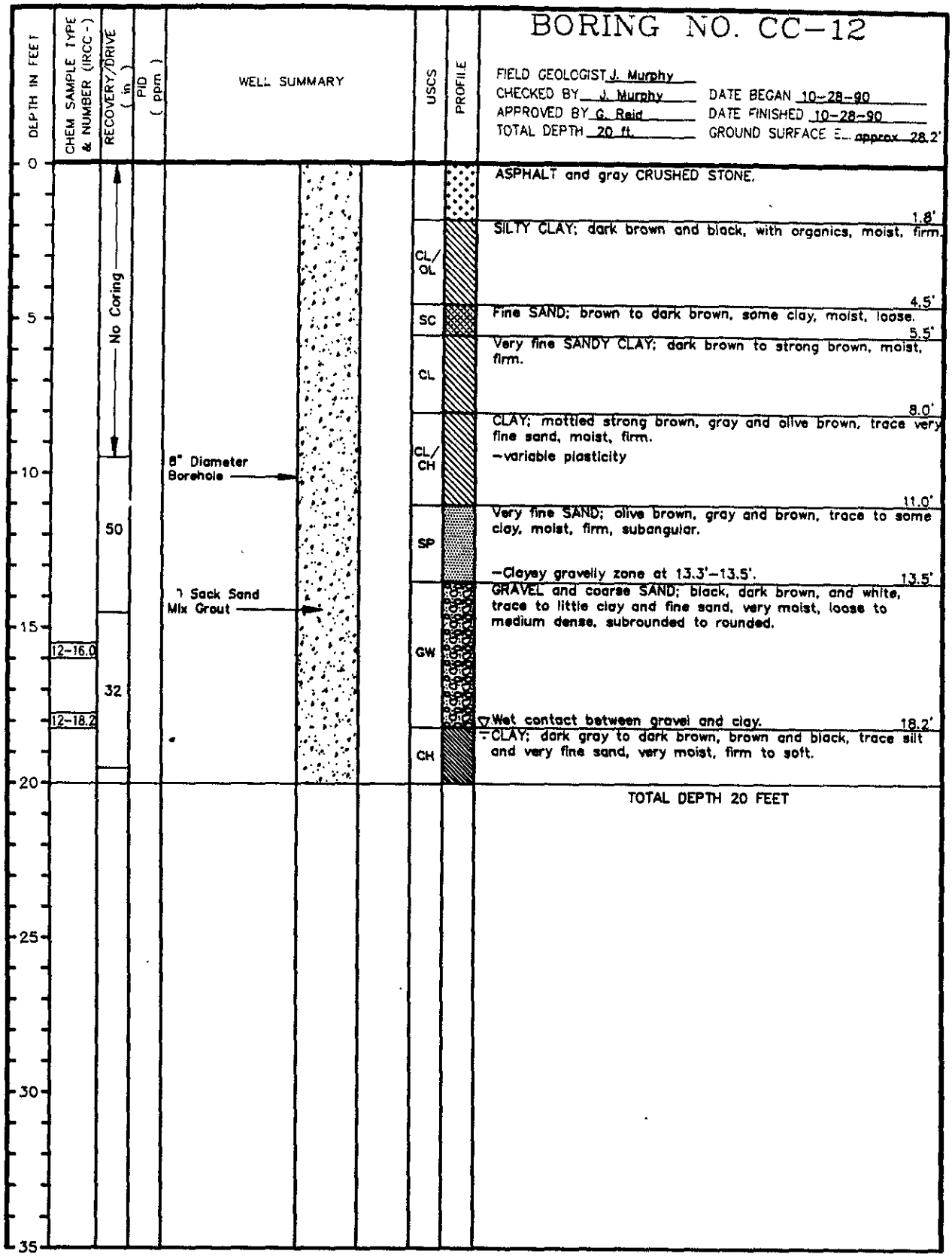
IR-CC-11(*IR2)

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. CC-12

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-28-90
APPROVED BY G. Reid — DATE FINISHED 10-28-90
TOTAL DEPTH 20 ft. — GROUND SURFACE E. approx 28.2'



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PAGE 1 OF 1

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

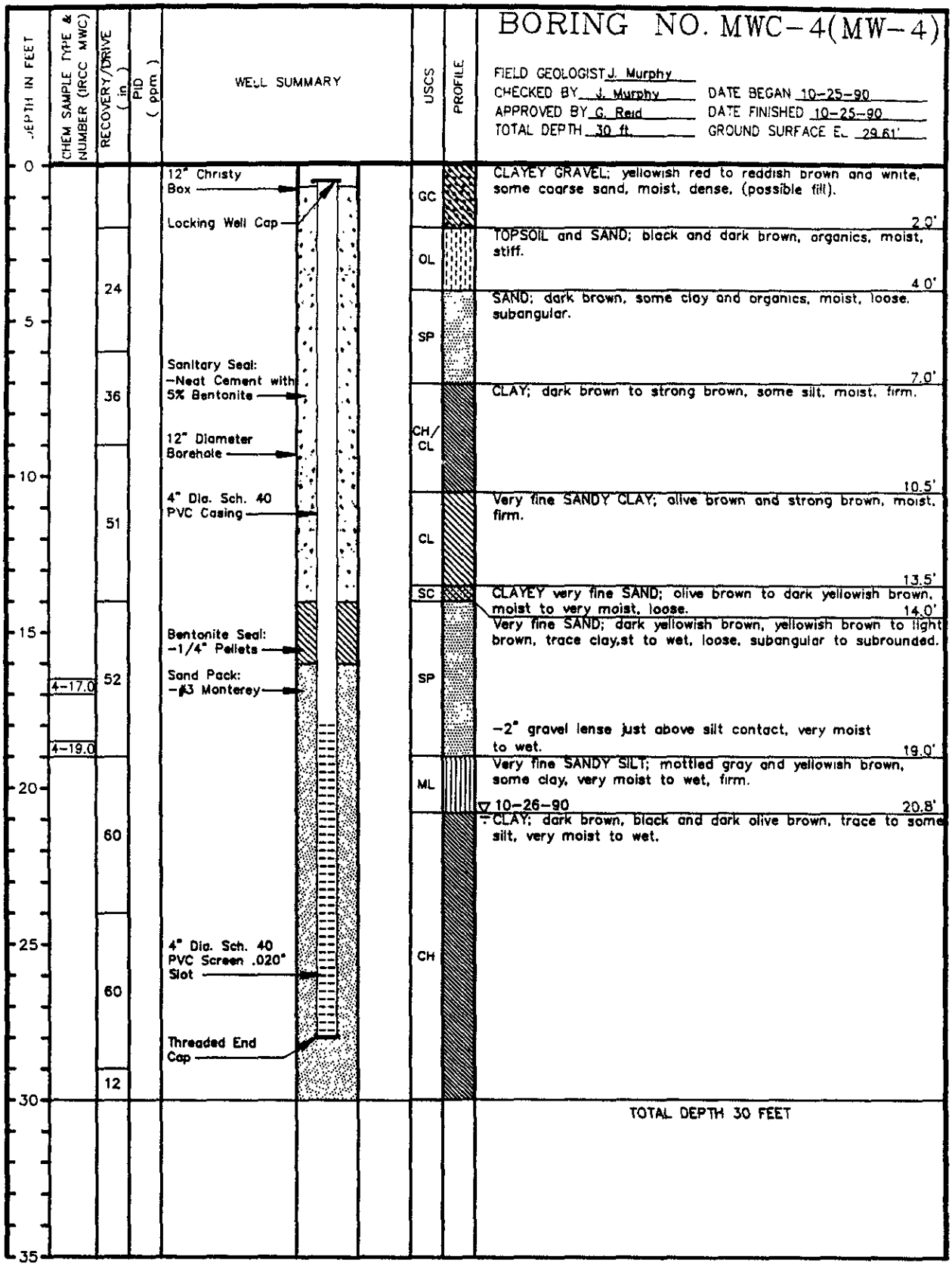
PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

IR-CC-12(•IR3)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. MWC-4(MW-4)

FIELD GEOLOGIST J. Murphy
CHECKED BY J. Murphy — DATE BEGAN 10-25-90
APPROVED BY G. Reid — DATE FINISHED 10-25-90
TOTAL DEPTH 30 ft. — GROUND SURFACE EL. 29.61'



DRILLING CO.: Water Development Corporation
DRILL METHOD: 3-1/4" I.D. Hollow Stem Auger - 5' Continuous Core
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 190678
CLIENT: Ingersoll Rand
LOCATION: 1944 Marina Boulevard
San Leandro, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

IR-MWC-4(MW3)

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. MW-2

FIELD GEOLOGIST D. Kubik Jr.
EDITED BY D. Kubik Jr.
CHECKED BY S. Mills
TOTAL DEPTH 20 feet

COORDINATES N _____ E _____
DATE BEGAN 11-10-89
DATE FINISHED 11-10-89
GROUND SURFACE EL. 24.70 ft

DEPTH IN FEET	SAMPLE TYPE & NUMBER	RECOVERY/DRIVE (in.)	PID (ppm)	WELL SUMMARY	BLOWS PER FOOT (N)	USCS	PROFILE
0			0	G-5 Christy Box			
				Portland Cement			
5	SS1	5/18	0		50+	ML	
			0	Bentonite Pellets			
10	SS2	8/18	0	#3 Lonestar Sand	35	CL	
15	SS3	5/18	0	4" dia. Sch. 40 S.S. Screen .010" Slot	25	SP / CL	
				End Cap			
20			0	Bentonite Grout			
25							
30							
35							

ASPHALT; 2"

CLAYEY SILT; brown, moist, soft, non-plastic. 9'

CLAYEY SILT; light brown, dry, soft, non-slightly plastic. 11.5'

SAND; light brown, moist, dense, fine, subangular, poorly graded.

▽ Ground water encountered at 15' 15'

CLAY; brown, wet, firm, moderately plastic. Contains less than 1% fine GRAVEL.

TOTAL DEPTH 20 FEET

DRILLING CO.: Kvilhaug Well Drilling and Pump Co., Inc.
DRILL METHOD: Hollow Stem Auger; Mobile B-61
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 148025
CLIENT: Ingersoll-Rand Corporation
LOCATION: 1944 Marina Blvd
San Leandro, California

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

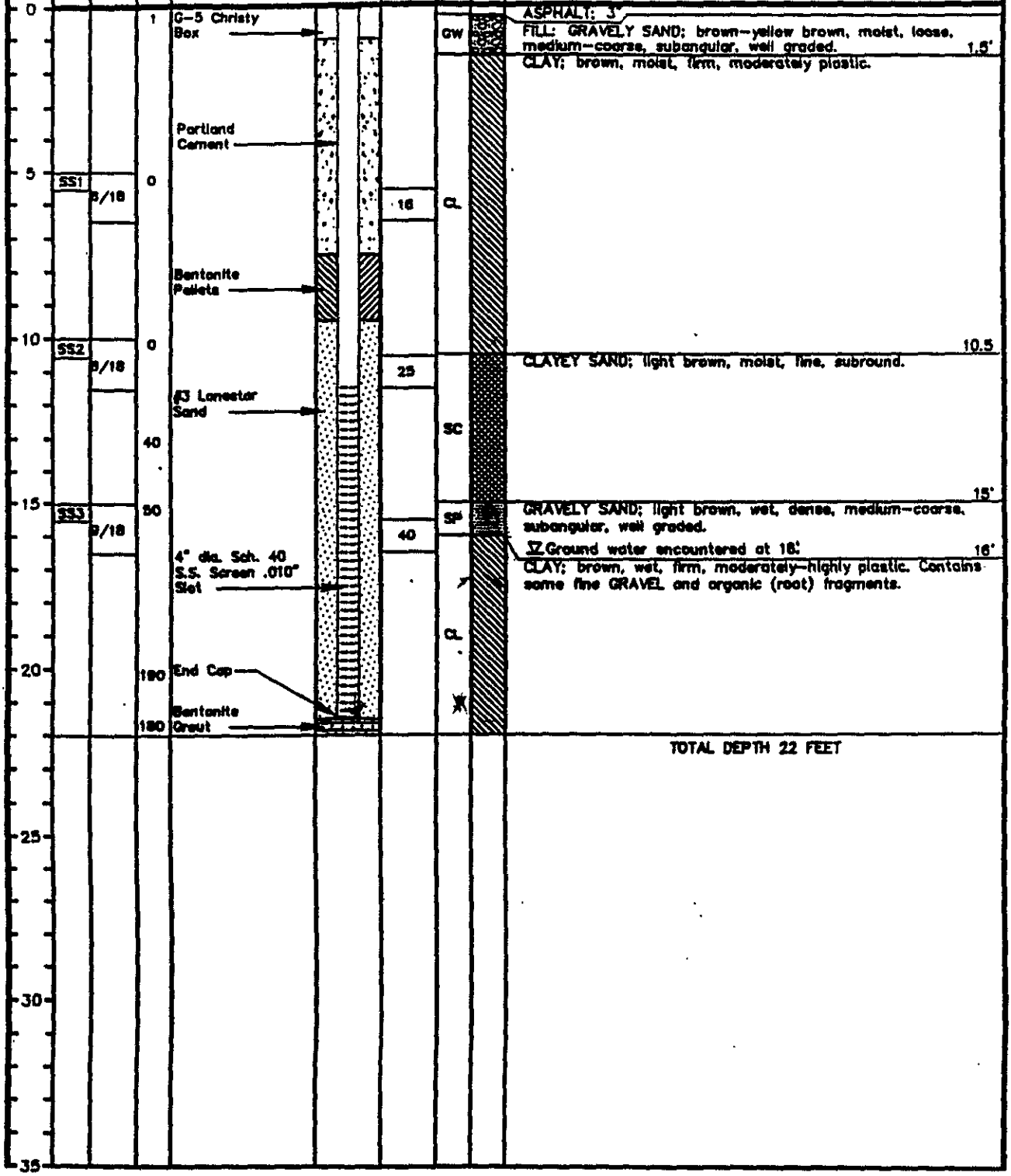
IR-MW2

INTERNATIONAL TECHNOLOGY CORPORATION

BORING NO. MW-3

FIELD GEOLOGIST D. Kublik Jr.
EDITED BY D. Kublik Jr.
CHECKED BY S. Mills
TOTAL DEPTH 22 feet

COORDINATES N _____ E _____
DATE BEGAN 11-10-89
DATE FINISHED 11-10-89
GROUND SURFACE EL. 27.33 ft.



DRILLING CO.: Kvilhaug Well Drilling and Pump Co., Inc.
DRILL METHOD: Hollow Stem Auger; Mobile B-61
SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 148025
CLIENT: Ingersoll-Rand Corporation
LOCATION: 1944 Marina Blvd.
San Leandro, California

SEE LEGEND FOR LOGS AND TEST PITS
FOR EXPLANATION OF SYMBOLS AND TERMS

IR-MW3

INTERNATIONAL TECHNOLOGY CORPORATION

APPENDIX B

ELEVATION SURVEY RECORDS

SURVEYING

EARL L. GRAY — Licensed Land Surveyor
3496 Buskirk Ave., Suite 103, Pleasant Hill, CA 94523 • (415) 934-4322

November 21, 1990
Job No. 9073

I T Corportion
4585 Pacheco Blvd.
Martinez, CA 94553

Attn: Mr. Jack Murphy

RE: Monitoring well elevations at Ingersoll-Rand Equipment Corporation, 1944 Marina Boulevard, San Leandro, California

General Notes:

1) Basis of elevation, City of San Leandro Benchmark; cinch nail on top of curb at storm water inlet southeast corner of the intersection of Marina Boulevard and Merced Street Elevation = 22.96 (1929 NGVD sea level datum) 1973 adjustment as per City of San Leandro Engineering and Transportion.

2) Elevation of the top of the 4" PVC and RIM was taken at a cut groove located on the northerly side and painted with orange paint.

3) Elevation was determined from a field survey on November 15, 1990 as per field book 67, pages 22 and 23.

MONITORING WELL ELEVATIONS

NUMBER	4" PVC ELEV.	RIM ELEV.
MW-1	24.97	25.58
MW-2	24.64	25.00
MW-3	27.51	28.00
MW-4	28.92	29.61

LICENSED LAND SURVEYOR
EARL L. GRAY
3874
Expires 1-30-92
STATE OF CALIFORNIA

Prepared under the direction of:

Earl L. Gray

Earl L. Gray
LS 3874

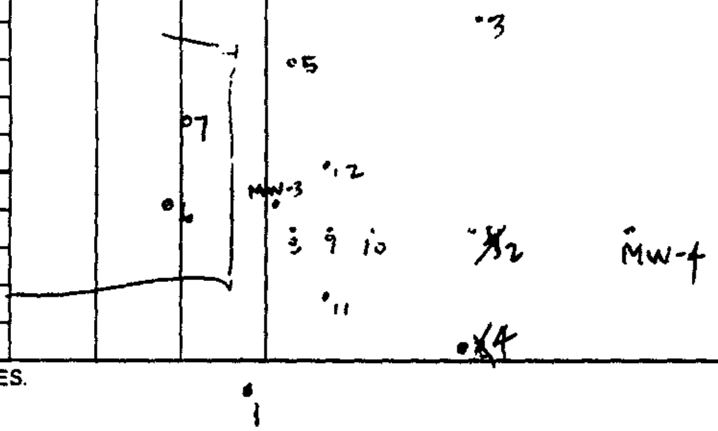
INTERNATIONAL TECHNOLOGY CORPORATION

Field Log: Approximated Elevations for Borings & Vadose wells

~~VISUAL CLASSIFICATION OF SOILS~~

PROJECT NUMBER 190617	PROJECT NAME	
BORING NUMBER	COORDINATES	DATE:
ELEVATION	GWL Depth / Date/Time	DATE STARTED:
ENGINEER/GEOLOGIST	Depth / Date/Time	DATE COMPLETED:
DRILLING METHODS		PAGE OF

DEPTH ( )	SAMPLE TYPE & NO	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
				boring / ref / Δ				
				CC-01 / MW-1 / +0.6		26.2		
				CC-08 / MW-3 / -0.2		27.8		
				CC-09 / MW-3 / -0.2		27.8		
				CC-10 / MW-3 / +0.9		28.9		
				CC-11 / MW-3 / -0.6		27.4		
				CC-12 / MW-3 / +0.2		28.2		
				→ CC-02 / MW-4 / +1.7		31.3		
				→ CC-04 / MW-4 / +2.3		31.9		
				CC-05 / MW-3 / 0.0		28.00		
				CC-03 / MW-3 / +2.5		30.5		
				CC-06 / MW-3 / +0.5		28.5		
				CC-07 / MW-3 / +0.5		28.5		



NOTES.

243A-3-86

APPENDIX C

CERTIFICATES OF ANALYSIS, REQUESTS FOR ANALYSIS, AND CHAIN OF CUSTODY MAINFESTS

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100045	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-01-13.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected
Spike Recvoery is 107%
Duplicate Deviation is 5.8%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100046	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-01-17.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	0.010
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100047	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-02-16.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100049	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-02-20.5 SOIL

depth

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	190
Benzene	0.005	3.0
Toluene	0.005	48
Xylenes	0.005	29
Ethylbenzene	0.005	5.9

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100050	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-02-27.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.065
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	0.011

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100051	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-03-17.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.006
Toluene	0.005	0.011
Xylenes	0.005	0.030
Ethylbenzene	0.005	0.008

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-22-90
Date Received: 10-22-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100052	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-03-18.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.012
Xylenes	0.005	0.028
Ethylbenzene	0.005	0.006

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-23-90
Date Received: 10-23-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100053	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-04-16.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected
Spike Recovery is 109%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

T Corporation
557 Pacheco Blvd.
artinez, CA 94553
ttn: Jack Murphy
Project Manager

Date Sampled: 10-23-90
Date Received: 10-23-90
Date Reported: 10-23-90

Sample Number	Sample Description
7900056	Ingersol Rand San Leandro IT# 190678 IRCC-04-22.0 SOIL

ANALYSIS

	Detection Limit ppm	Sample Results ppm
otal Petroleum Hydrocarbons s Gasoline	1.0	7.2
enzene	0.005	1.1
oluene	0.005	0.91
ylenes	0.005	1.3
thylbenzene	0.005	0.25

QA/QC: *Blank none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

OBILE CHEM LABS

onald G. Evans
ab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-23-90
Date Received: 10-23-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100062	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-07-18.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.006
Xylenes	0.005	0.015
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-23-90
Date Received: 10-23-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100058	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-05-16.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.019
Toluene	0.005	0.026
Xylenes	0.005	0.040
Ethylbenzene	0.005	0.008

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-23-90
Date Received: 10-23-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100059	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-05-18.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.006
Xylenes	0.005	0.011
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-23-90
Date Received: 10-23-90
Date Reported: 10-23-90

Sample Number	Sample Description
V100061	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-06-19.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.009
Xylenes	0.005	0.015
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

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Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation/EGS
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reid
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 11-02-90

Sample Number	Sample Description
V100062	Project # 190678 Ingersoll-Rand IRCC-07-~~18.0~~ 15.0' SOIL Chain of Custody A 9425 Request for Anal. 18 9418 WCS.

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

phoned this 12/12/90
1:40 pm

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100064	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-08-9.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	0.006
Xylenes	0.005	0.016
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected
Spike Recovery is 77%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100065	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-08-14.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	12
Benzene	0.005	0.44
Toluene	0.005	0.49
Xylenes	0.005	1.2
Ethylbenzene	0.005	0.23

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100066	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-09-9.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100067	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-09-14.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	180
Benzene	0.005	0.25
Toluene	0.005	2.6
Xylenes	0.005	15
Ethylbenzene	0.005	6.4

QA/QC: Sample blank is none detected
Duplicate Deviation is 2.7%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100068	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-10-14.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.011
Toluene	0.005	<0.005
Xylenes	0.005	0.008
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

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IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100069	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-10-18.2 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.077
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100070	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-10-19.5 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	150
Benzene	0.005	3.3
Toluene	0.005	7.1
Xylenes	0.005	14
Ethylbenzene	0.005	4.5

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reed
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 10-24-90

Sample Number	Sample Description
V100071	Project # 109678 Ingersoll Rand - San Leandro 1944 Marina Blvd. IRCC-10-22.0 SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1.4
Benzene	0.005	0.42
Toluene	0.005	0.020
Xylenes	0.005	0.071
Ethylbenzene	0.005	0.033

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation/EGS
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reid
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 11-02-90

Sample Number	Sample Description
V100072	Project # 190678 Ingersoll-Rand IRCC-11-15.0' SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.011
Toluene	0.005	<0.005
Xylenes	0.005	0.011
Ethylbenzene	0.005	<0.005

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation/EGS
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Gary Reid
Project Manager

Date Sampled: 10-24-90
Date Received: 10-24-90
Date Reported: 11-02-90

Sample Number	Sample Description
V100073	Project # 190678 Ingersoll-Rand IRCC-11-18.5' SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.022
Toluene	0.005	0.009
Xylenes	0.005	0.043
Ethylbenzene	0.005	0.012

QA/QC: Sample blank was none detected
Duplicate Deviation is 3.8%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX Distinction

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS – CENTRAL VALLEY

351 N. Walnut Road, No. 4 • Turlock, CA 95381
Phone (209) 632-2210 • Fax (209) 632-2209

RECEIVED

NOV 1 3 1990

Martinez Engineering

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94553
Attn: Jack Murphy
Project Manager

Date Sampled: 10-29-90
Date Received: 10-30-90
Date Reported: 11-02-90

Sample Number	Sample Description
010348	Project #: 190678 Ingersoll Rand CC12 @ 16′ SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1.0
Benzene	0.005	0.12
Toluene	0.005	0.46
Xylenes	0.005	0.145
Ethylbenzene	0.005	0.018

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A. Dishneau

for Ronald G. Evans
Lab Director

MOBILE CHEM LABS – CENTRAL VALLEY

351 N. Walnut Road, No. 4 • Turlock, CA 95381
Phone (209) 632-2210 • Fax (209) 632-2209

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94553
Attn: Jack Murphy
Project Manager

Date Sampled: 10-29-90
Date Received: 10-30-90
Date Reported: 11-02-90

Sample Number	Sample Description
010349	Project #: 190678 Ingersoll Rand CC-12 @ 18.2' SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	15
Benzene	0.005	0.36
Toluene	0.005	0.66
Xylenes	0.005	1.9
Ethylbenzene	0.005	0.34

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A V Dushmeau

for Ronald G. Evans
Lab Director

MOBILE CHEM LABS – CENTRAL VALLEY

351 N. Walnut Road, No. 4 • Turlock, CA 95381
Phone (209) 632-2210 • Fax (209) 632-2209

RECEIVED
NOV 1 3 1990
Martinez Engineering

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94553
Attn: Jack Murphy
Project Manager

Date Sampled: 10-25-90
Date Received: 10-25-90
Date Reported: 11-02-90

Sample Number	Sample Description
010318	Project #: 190678 Ingersoll Rand MWC-4 @ 17.0' SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A. Dishmeau

for Ronald G. Evans
Lab Director

MOBILE CHEM LABS — CENTRAL VALLEY

351 N. Walnut Road, No. 4 • Turlock, CA 95381
Phone (209) 632-2210 • Fax (209) 632-2209

IT Corporation
4585 Pacheco Blvd.
Martinez, CA 94553
Attn: Jack Murphy
Project Manager

Date Sampled: 10-25-90
Date Received: 10-25-90
Date Reported: 11-02-90

Sample Number	Sample Description
010319	Project #: 190678 Ingersoll Rand MWC-4 @ 19.0' SOIL

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A. Dishmeau

for Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

IT Corporation/EGS
4585 Pacheco Blvd.
Martinez, CA 94549
Attn: Garv Reid
Project Manager

Date Sampled: 11-16-90
Date Received: 11-16-90
Date Reported: 11-19-90

Sample Number	Sample Description
B110072	Project # 190678 Ingersoll Rand - San Leandro IR-GW-04.90 WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	32.000
Benzene	0.5	1.500
Toluene	0.5	2.000
Xylenes	0.5	27.000
Ethylbenzene	0.5	720

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 602 used for BTX Distinction

MOBILE CHEM LABS

Joyce A. Dishneau

for Ronald G. Evans
Lab Director

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. | | |

C/C Control No. A-90781

PROJECT NAME Ingersoll Road

PROJECT NUMBER 109678

PROFIT CENTER NUMBER 3541

PROJECT MANAGER Gary Reid

BILL TO IT corporation
Martinez

PURCHASE ORDER NO.

DATE SAMPLES SHIPPED 1-22-90

LAB DESTINATION on-site

LABORATORY CONTACT Joe La Voie

SEND LAB REPORT TO Jack Murphy
IT Martinez

DATE REPORT REQUIRED 1-22-90

PROJECT CONTACT Jack Murphy

PROJECT CONTACT PHONE NO. 415 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
IRcc-01-13.5	2" Brass sleeve	2" x 6"	none	TPH & BTXE	—
IRcc-01-17.5	"	"	"	"	
IRcc-02-11.0	"	"	"	"	
IRcc-02-14.0	"	"	"	"	
IRcc-02-20.5	"	"	"	"	
IRcc-02-27.5	"	"	"	"	
IRcc-03-15.0	"	"	"	"	
IRcc-03-18.5	"	"	"	"	

TURNAROUND TIME REQUIRED: (Rush must be approved by the Laboratory Project Manager.)

Normal _____ Rush _____ (Subject to rush surcharge)

QC LEVEL (Levels II and III subject to surcharge, project-specific requirements must be submitted to lab before beginning work)

I _____ II _____ III _____ Project Specific _____

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Non-hazard X Flammable _____ Skin Irritant _____ Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis Lab will charge for packing, shipping, archive and disposal)

Return to Client X Disposal by Lab _____ Archive _____ (Indicate number of months.)

FOR LAB USE ONLY

Received by Joe LaVoie Date / Time 10/22/90

WHITE - Original, to accompany samples

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. 1 . 1 1 1

C/C Control No. A 99294

PROJECT NAME Ingersoll Rand

PROJECT NUMBER 190678

PROFIT CENTER NUMBER 3541

PROJECT MANAGER Gary Reid

BILL TO IT Martinez

PURCHASE ORDER NO.

DATE SAMPLES SHIPPED 10/22/90 On-site Lab

LAB DESTINATION On-site

LABORATORY CONTACT Joe La Voie

SEND LAB REPORT TO Jack Murphy
4585 Pacheco Blvd
Martinez, CA 94553

DATE REPORT REQUIRED

PROJECT CONTACT Jack Murphy

PROJECT CONTACT PHONE NO. (415) 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
IRec-04-16.5'	2" Brass Sleeve (Soil)	2" x 6"	none	TPH and BTXE	
IRec-04-19.0'	" "	" "	" "	" "	
IRec-04-26.0'	" "	" "	" "	" "	Hold until my notice JM
IRec-04-22.0'	" "	" "	" "	" "	Hold JM
IRec-05-13.0'		" "	" "	" "	Hold until my notice JM
IRec-05-16.5'	" "	" "	" "	"	
IRec-05-18.0'	" "	" "	" "	"	
IRec-06-15.0'	"	"	"	"	Hold until my notice JM
IRec-06-19.5	"	"	"	"	
IRec-07-13.0	"	"	"	"	
IRec-07-15.0	"	"	"	"	Hold until my notice JM

TURNAROUND TIME REQUIRED: (~~Rush must be approved by the Laboratory Project Manager.~~)

Normal _____ Rush X (Subject to rush surcharge)

QC LEVEL: (Levels II and III subject to surcharge; project-specific requirements must be submitted to lab before beginning work)

I _____ II _____ III _____ Project Specific _____

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Non-hazard _____ Flammable X Skin Irritant _____ Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, archive and disposal)

Return to Client X Disposal by Lab _____ Archive _____ (Indicate number of months.)

FOR LAB USE ONLY

Received by Joe LaVoie Date / Time _____

WHITE - Original, to accompany samples

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. [illegible]

C/C Control No. [illegible]

PROJECT NAME: Ingersoll Rand

PROJECT NUMBER: 190678

PROFIT CENTER NUMBER: 3541

PROJECT MANAGER: Gary Reid

BILL TO: Jack Murphy
4505 Pacheco Blvd.
Mtz, CA 94553

PURCHASE ORDER NO.:

DATE SAMPLES SHIPPED: 10/24/90

LAB DESTINATION: on-site & stationary (Mtz)

LABORATORY CONTACT: Joe LaVoie

SEND LAB REPORT TO: J. Murphy
Mtz. office

DATE REPORT REQUIRED: 10/24/90

PROJECT CONTACT: J. Murphy

PROJECT CONTACT PHONE NO.: 415 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
IRcc-08-9.5	(Soil) Brass sl.	2" x 6"	none	TPH low Boil and BTXE	
IRcc-08-14.5	" "	"	"	"	
IRcc-09-9.0	"	"	"	"	
IRcc-09-14.5	"	"	"	"	
IRcc-10-14.0	"	"	"	"	
IRcc-10-17.2	"	"	"	"	
IRcc-10-19.5	"	"	"	"	
IRcc-10-22.0	"	"	"	"	
IRcc-11-15.0	"	"	"	" 2 week	Run at Stationary Lab
IRcc-11-18.5	"	"	"	" turnaround	Run at stationary lab

TURNAROUND TIME REQUIRED: (Rush must be approved by the Laboratory Project Manager.)

Normal X Rush X (Subject to rush surcharge.)

QC LEVEL: (Levels II and III subject to surcharge, project-specific requirements must be submitted to lab before beginning work.)

I ____ II ____ III ____ Project Specific ____

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances.)

Non-hazard ____ Flammable X Skin Irritant ____ Highly Toxic ____ Other ____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, archive and disposal.)

Return to Client ____ Disposal by Lab ____ Archive ____ (Indicate number of months.)

FOR LAB USE ONLY

Received by: Joe LaVoie Date/Time: 10/24/90 16 45

WHITE - Original, to accompany samples

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. B [illegible]
C/C Control No. _____

PROJECT NAME: Ingersoll Rand
PROJECT NUMBER: 190678
PROJECT MANAGER: Gary Reid
BILL TO: Jack Murphy
4585 Pacheco Blvd
Martinez, CA 94553

PURCHASE ORDER NO. _____

DATE SAMPLES SHIPPED: 10/25/90
LAB DESTINATION: Mobil Chem Labs. (Mts) Statesville
LABORATORY CONTACT: Joe La Voie
SEND LAB REPORT TO: J. Murphy
4585 Pacheco Blvd
Martinez, CA 94553
DATE REPORT REQUIRED: 2 week turnaround
PROJECT CONTACT: J. Murphy
PROJECT CONTACT PHONE NO. 415 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
IR-MW-4-170	Soil	2" x 6"	None	TPH low boiling & BTXE	
IR-MW-4-190	"	"	"	"	

TURNAROUND TIME REQUIRED: (Rush must be approved by the Project Manager)

Normal X Rush _____ (Subject to rush surcharge)

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Nonhazard _____ Flammable X Skin Irritant _____ Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, and disposal)

Return to Client _____ Disposal by Lab X

FOR LAB USE ONLY

Received By [signature] Date/Time 2:45 10/25

WHITE - Original, to accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. B 30038
C/C Control No. _____

PROJECT NAME: Ingersoll Rand
PROJECT NUMBER: 190678
PROJECT MANAGER: Gary Reed
BILL TO: Jack Murphy IT Corporation
4505 Pacheco Blvd
Martinez CA 94553
PURCHASE ORDER NO. _____

DATE SAMPLES SHIPPED: 10/30/90
LAB DESTINATION: Mobile Chem. Labs Mtz.
LABORATORY CONTACT: Joe LaVoie
SEND LAB REPORT TO: Jack Murphy IT Corp.
4505 Pacheco Blvd
Martinez CA 94553
DATE REPORT REQUIRED: 2 week turnaround
PROJECT CONTACT: Jack Murphy
PROJECT CONTACT PHONE NO. 415 372 9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
IRCC-12-16.0	Soil	2"x6" Brass	None	TPH (low boil.) & BTX and E	—
IRCC-12-18.2	"	"	"	"	"

TURNAROUND TIME REQUIRED: (Rush must be approved by the Project Manager.)

Normal X Rush _____ (Subject to rush surcharge)

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Nonhazard _____ Flammable X Skin Irritant _____ Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis Lab will charge for packing, shipping, and disposal)

Return to Client _____ Disposal by Lab X

FOR LAB USE ONLY

Received By Chris Lecce Date/Time 10/30/90 12:15

WHITE - Original, to accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. 13115
C/C Control No. A 90786

PROJECT NAME: Ingersoll Rand
PROJECT NUMBER: 190678
PROFIT CENTER NUMBER: 3541
PROJECT MANAGER: Garry Reid
BILL TO: J. Murphy, Mtz. office (IT)

PURCHASE ORDER NO.:

DATE SAMPLES SHIPPED: 11/16/90
LAB DESTINATION: Mobile Chem Labs - Mtz.
LABORATORY CONTACT: Chris
SEND LAB REPORT TO: J. Murphy, 4585 Pacheco Blvd, Mtz CA 94553
DATE REPORT REQUIRED: 24 hour turnaround
PROJECT CONTACT: J. Murphy
PROJECT CONTACT PHONE NO.: 415 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
IR-GW-0490	groundwater	2 X 40 ml. VOA	HCl	TPH low boil. & BTXE	—

TURNAROUND TIME REQUIRED: (Rush must be approved by the Laboratory Project Manager.)
Normal ____ Rush X (Subject to rush surcharge)

QC LEVEL: (Levels II and III subject to surcharge; project-specific requirements must be submitted to lab before beginning work.)
I ____ II ____ III ____ Project Specific ____

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances.)
Non-hazard X Flammable ____ Skin Irritant ____ Highly Toxic ____ Other ____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, archive and disposal.)
Return to Client ____ Disposal by Lab X Archive ____ (Indicate number of months.)

FOR LAB USE ONLY
Received by Christine Lucas Date/Time 11/16/90 14:34

WHITE - Original, to accompany samples

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. 18-1412

C/C Control No. A 90781

PROJECT NAME/NUMBER Ingersoll Rand 109678 LAB DESTINATION On-site

SAMPLE TEAM MEMBERS J Murphy CARRIER/WAYBILL NO.

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
IRCC-01-13.5	CC-01@13.5'	10/22@11:27	SOIL	2" Brass	on site lab	—
IRCC-01-17.5	CC-01@ 17.5'	10/22@11:35	"	"	"	"
IRCC-02-16.0	CC-02@ 16.0'	10/22@14:33	SOIL	2" BRASS	"	"
IRCC-02-19.0	CC-02@ 19.0'	10/22 14:33	"	"	"	"
IRCC-02-20.5	CC-02@ 20.5'	10/22 14:49	"	"	"	
IRCC-02-27.5	CC-02@ 27.5'	10/22 15:05	"	"	"	"
IRCC-03-15.0	CC-03@ 15.0	10/22 17:05	"	"	"	"
IRCC-03-18.5	CC-03@ 18.5'	10/22 17:15	"	"	"	"

Special Instructions: —

Possible Sample Hazards: — —

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: J Murphy 10/22/90 19:25

   Received By: Joe Newbie Mobile Chem 10/22 18:30

2. Relinquished By:

   Received By:

3. Relinquished By:

   Received by:

4. Relinquished By:

   Received By:

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. _____

C/C Control No. A 90782

PROJECT NAME/NUMBER Ingersoll Rand

LAB DESTINATION On-site & stationary

SAMPLE TEAM MEMBERS J. Murphy

CARRIER/WAYBILL NO. _____

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
IRcc-08-9.5	CC-08 @ 9.5'	10/24/90 @ 8:15	soil	Bass sleeve 2"		
IRcc-08-14.5	CC-08 @ 14.5'	10/24/90 @ 8:25	"	"		
IRcc-09-9.0	CC-09 @ 9.0	10/24/90 @ 11:00	"	"		
IRcc-09-14.5	CC-09 @ 14.5	10/24/90 @ 11:45	"	"		
IRcc-10-14.0	CC-10 @ 14.0'	10/24/90 @ 13:10	"	"		
IRcc-10-18.2	CC-10 @ 18.2	10/24/90 @ 13:20	"	"		
IRcc-10-19.5	CC-10 @ 19.5	10/24/90 @ 13:35	"	"		
IRcc-10-22.0	CC-10 @ 22.0	10/24/90 @ 13:44	"	"		
IRcc-11-15.0	CC-11 @ 15.0	10/24/90 @ 16:25	"	"		
IRcc-11-18.5	CC-11 @ 18.5	10/24/90 @ 16:30	"	"		

Special Instructions: _____

Possible Sample Hazards: _____

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: [signature] 10/24/90 16:40

   Received By: [signature] 10/24/90 16:40

2. Relinquished By: _____

   Received By: _____

3. Relinquished By: _____

   Received by: _____

4. Relinquished By: _____

   Received By: _____

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. _____

C/C Control No. A 90785

PROJECT NAME/NUMBER Ingersoll Rand 190678

LAB DESTINATION Mobile Chem Labs Nfz.

SAMPLE TEAM MEMBERS J. Murphy

CARRIER/WAYBILL NO. _____

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
IRcc-12-16.0	CC-12 @ 16.0'	10/29/90 @ 8:25	Soil	2"x6" Brass		
IRcc-12-18.2	CC-12 @ 18.2	10/29/90 @ 8:35	"	"		

Special Instructions: _____

Possible Sample Hazards: Gasoline (BTX and E), flammable

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: J. Murphy IT 10/30/90 @ 12:15

   Received By: Chris Lecce MCL 10/30/90 12:16

2. Relinquished By: _____

   Received By: _____

3. Relinquished By: _____

   Received by: _____

4. Relinquished By: _____

   Received By: _____

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. 189415

C/C Control No. A 90786

PROJECT NAME/NUMBER Ingersoll Rand

LAB DESTINATION Mobile Chem Labs Mtz

SAMPLE TEAM MEMBERS J. Murphy

CARRIER/WAYBILL NO. _____

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
IR-GW-04190	MW-4 40 ml. VOA [redacted]	11/16/90@13:15	Water	40 ml. VOA	Plastic baggie	

Special Instructions: —

Possible Sample Hazards: —

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: Joe Murphy Jr. 11/16/90@14:36

   Received By: Christina Checca 11/16/90@14:36

2. Relinquished By: _____

   Received By: _____

3. Relinquished By: _____

   Received by: _____

4. Relinquished By: _____

   Received By: _____

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. 189418

C/C Control No. A 99294

PROJECT NAME/NUMBER Ingersoll Rand

LAB DESTINATION [redacted] On-site

SAMPLE TEAM MEMBERS J Murphy

CARRIER/WAYBILL NO.

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
IRcc-04-16.5'	CC-04 @ 16.5'	10/23/90 @ 9:15	Soil	2" Brass sl.	—	—
IRcc-04-19.0'	CC-04 @ 19.0'	10/23/90 @ 9:26	Soil	"		
IRcc-04-26.0'	CC-04 @ 26.0'	10/23/90 @ 9:51	"	"	holding until further notice	
IRcc-04-22.0'	CC-04 @ 22.0'	10/23/90 @ 9:38	"	"	"	
IRcc-05-13.0	CC-05 @ 13.0'	10/23/90 @ 11:40	"	"	holding until further notice	
IRcc-05-16.5	CC-05 @ 16.5'	10/23/90 @ 11:50	"	"		
IRcc-05-18.0	CC-05 @ 18.0'	10/23/90 @ 11:58	"	"		
IRcc-06-15.0	CC-06 @ 15.0'	10/23/90 @ 14:15	"	"	holding until further notice	
IRcc-06-19.5	CC-06 @ 19.5'	10/23/90 @ 14:25	"	"		
IRcc-07-18.0	CC-07 @ 18.0'	10/23/90 @ 15:10	"	"		
IRcc-07-15.0	CC-07 @ 15.0	" " @ 15:55	"	"	holding until further notice	

Special Instructions:

Possible Sample Hazards:

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: Joe Murphy Jr. 10/23/90 @ 16:46

   Received By: Joe Howard 10/23/90 16:48

2. Relinquished By:

   Received By:

3. Relinquished By:

   Received by:

4. Relinquished By:

   Received By:

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. _____

C/C Control No. 168169

PROJECT NAME/NUMBER Ingersoll Rand

LAB DESTINATION Stationary Lab (Mobile Chem Lab) Alta

SAMPLE TEAM MEMBERS J. Murphy

CARRIER/WAYBILL NO. _____

Sample Number	Sample Location and Description	Date and Time Collected	Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No
IR-MWC-4-17.0	MWC-4@17.0'	10/25/90@09:55		2"x6" Brass	Cooler with Blue Ice	
IR-MWC-4-19.0	MWC-4@19.0'	10/25/90@10:05		"	" "	

Special Instructions: _____

Possible Sample Hazards: _____

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: [signature] 10/25/90@14:48

   Received By: [signature] 10/25 2:45

2. Relinquished By: _____

   Received By: _____

3. Relinquished By: _____

   Received by: _____

4. Relinquished By: _____

   Received By: _____

WHITE - To accompany samples
YELLOW - Field copy