Division of Environmental Remediation

G.E. WEST LOT
UTICA (C), ONEIDA COUNTY, NEW YORK
SITE NO. 6-33-036
March 1998

RECORD OF DECISION

DECLARATION STATEMENT
RECORD OF DECISION

GE WEST LOT SITE
City of Utica, Oneida County, New York
Site No. 6-33-036

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the GE West Lot Site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40 CFR 300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the GE West Lot Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix I of the ROD.

Assessment of the Site

Actual or threatened release of volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) Report for the GE West Lot Site and the criteria identified for evaluation of alternatives, the NYSDEC has selected the removal and disposal of contaminated soil from the burn pit area and disposal of soil from an on-site treatment cell. Contaminated groundwater will also be collected for treatment. The components of the remedy are as follows:

- Removal of PCB and VOC contaminated soils and waste, which exceed the Department's cleanup goals (TAGM 4046), from the IRM treatment cell and in the vicinity of the former burn pit. Based upon the Feasibility Study, 2,200 and 870 cubic yards of soils will be removed from the treatment cell and burn pit areas, respectively. The soils will be stockpiled and characterized for off-site disposal at either a permitted solid waste or hazardous waste landfill. The excavated area will be backfilled with clean soil, graded, and vegetated. Confirmatory soil sampling will be performed to ensure that cleanup goals are achieved.

- Overburden pumping well(s) will be installed to capture and treat VOC contaminated overburden groundwater downgradient of the burn pit (Alternative # 3). At least one additional pumping well located along the axis of the plume may be needed to maximize practical containment of the plume. The number, location and spacing of wells will be determined during the remedial design. The design goals will be to restore contaminated groundwater to groundwater

quality standards within the shortest time technically feasible and to protect down gradient

The groundwater collection and treatment system would consist of extraction wells, discharge to adjacent surface water or to discharge to an on site infiltration system.

As part of the monitoring program, it will be necessary to evaluate the effectiveness of the groundwater remediation system over time. Additional groundwater investigations may need to be undertaken to monitor the effectiveness of the groundwater remedial system.

Additional monitoring wells will be installed to track and monitor the bedrock aquifer and to determine if future remedial activities are warranted to address deep or down gradient impacts. Monitoring will also be required to insure that downgradient surface water is protected.

Monitoring Monitoring and maintenance will be required for the groundwater collection and treatment system to insure proper operations, regulatory compliance, and protection of human health and the environment.

- The remedial design program will verify the components of the conceptual design and provide the [illegible] details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties pertaining to the remedy identified during the PDTS will be resolved.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being [illegible]

The selected Thes selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

5/30/98
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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RECORD OF DECISION
AT THE G.E. WEST LOT SITE

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The General Electric facility is a 35 acre property located on French Road in Utica, Oneida County, New York. In the early 1950's, GE constructed a 600,000 square foot manufacturing facility [illegible] for the production of aircraft engine components. In 1990, [illegible]

In January 1996, Martin Marietta merged into its parent corporation, LMC, and ceased to exist. LMC continued to operate the facility. LMC transferred ownership of the French Road facility [illegible] transferred in March 1997 to the Oneida County Industrial Development Agency (OCIDA). In September 1997, OCIDA transferred ownership of the eastern portion of the property to a private developer for construction of a retail store. The remainder of the property, including the former GE building, was leased by OCIDA to a local corporation.

The West Lot Site, located to the west of the main plant, is approximately 2 acres in size. The site is bounded by an abandoned railroad bed, the New York State Department of Transportation Maintenance Facility and the New Hartford Village Dump(a class 2 site) to the west, the plant parking lot and Chenango Road to the south, the GE Facility to the east, and open fields to the north.

The immediate vicinity is characterized by [illegible] wooded areas and the [illegible] area of concern is triangular in shape and slopes gently to the west-southwest. The surrounding area is a mix of commercial and industrial facilities intermixed with residential homes. All of the surrounding area is serviced by both public water and sewer. The area is heavily serviced by both road and railways.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

The disposal site is located to the west of the main manufacturing facility. The site was never used as part of the manufacturing area and was located at the edge of the employee parking lot.

[illegible] training exercises through the early 1970's. Waste materials, consisting primarily of wooden pallets and construction debris, were apparently brought to the site and ignited in the burn pit. The burn pit was [illegible] identified as an area approximately 20 feet in diameter located to the northwest of the parking lot.

During [illegible] GE employees [illegible] burned at the site. One of the former GE employees indicated that waste oils were also utilized during the 1950's and 1960's.

2.2: Remedial History

[illegible] groundwater. Due to the presence of VOCs and contravention of New York State Standards, Criteria and Guidance(SCGs), the site was listed as a Class 2 site in the NYS Inactive Hazardous Waste Disposal Site Registry.

In 1993, Martin Marietta and NYSDEC entered in an order on consent to perform a Remedial Investigation/Feasibility Study. Also in 1993, Martin Marietta developed, and initiated, an Interim Remedial Measure (IRM) that included the excavation of soils containing VOCs from within the burn pit area,

2. Site Assessment performed by O'Brien& Gere Engineers Inc. in May 1991;

SECTION 3: CURRENT STATUS

3.1: Summary of the Remedial Investigation

activities at the site.

- A review of all existing information.

horizontal extent of contamination.

- Groundwater modeling was conducted to estimate the lateral extent of groundwater contamination.

and surface water SCGs identified for the GE West Lot site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. Soil SCGs are based on NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046 soil cleanup objectives for the protection of groundwater.

3.1.1 Hydrogeologic Features

approximate 10 foot thick layer of fill consisting of loose, brown, fine sand with trace gravel was

occasional gravelly or silty lenses, is found beneath the glacial lacustrine unit. The final layer encountered is the glacial till unit. This approximate 10 to 12 foot unit consists of relatively dense, gray-brown, sandy silt with minor components of gray shaley gravel. Bedrock is encountered at approximately 43-47 feet below grade. The bedrock is a weathered grey shale and is described as an Ordovician Utica Formation. The majority of groundwater flow is limited to the glacial lacustrine deposit. The hydraulic gradient at the site is approximately 0.009 feet per foot to the southwest. Based upon results of slug tests and specific capacity tests, the hydraulic conductivity of the [illegible] deposit has been estimated to be approximately [illegible] centimeters per second (cm/sec). The groundwater flow velocity within the overburden is estimated at [illegible] feet per year.

3.1.2 Surface Water

The nearest surface water to the site is the Sauquoit Creek, which is approximately [illegible] feet to the south of the site. Samples collected during previous investigations performed at the New Hartford Village Dump Site No. 633026 (located west of the site) [illegible] compounds are believed to be associated with disposal practices at the New Hartford Village Dump.

3.1.3 Contaminants

The following is a description of impacts from the disposal of hazardous waste at the GE West Lot Site. Based upon the results of the remedial investigation in comparison to SCGs and potential public health and environmental exposure routes, [illegible]

3.1.3 (a) Soils

In March 1990, Dunn Geoscience performed a soil gas survey which identified that the former burn pit area contained VOC [illegible] levels up to 250 parts per million. In March 1990 O'Brien and Gere Engineers, installed one boring within the burn pit [illegible] of VOCs in the soil. Subsequently 9 additional borings were installed to further delineate the area.

The VOCs detected in soil at or near the burn pit include: 1,2 Dichloroethene (0.14 ppm to 140 ppm), tetrachloroethane (49 ppm), trichloroethene (0.21 ppm to 900 ppm), ethylbenzene (0.31 ppm to 77 ppm), toluene (0.24 ppm to 940 ppm) and xylene (1.1 ppm to 370 ppm).

In 1995 and 1996, approximately [illegible] cubic yards of VOC contaminated soil were removed for treatment as part of an IRM.

In 1996, additional soil sampling was conducted in the vicinity of the burn pit to delineate residual levels and quantities of PCB and VOC contamination [illegible] soil cleanup objectives. Approximately 870 cubic yards of contaminated soils were found to remain in the burn pit area which exceed soil cleanup objectives for Tetrachloroethene (non detect - 16 ppm), Ethylbenzene (non detect - 150 ppm) and Xylene (non detect - 710 ppm). PCBs were found in the range of non detect to 9.1 ppm. Semi-volatile organic compounds, pesticides and metals have not been identified as being significant within the soil medium.

3.1.3 (b) Sediments

The nearest surface body of water (Sauquoit Creek) is approximately 1/4 mile away from the site. No surface water nor sediments exist on, or directly adjacent to, the site, therefore, no sediment samples were taken.

Generally, groundwater found at the site is contaminated with chlorinated and non- chlorinated volatile organic compounds. Levels of total VOCs, found on-site, range from 66,000 ppb at the former burnpit to 1,000 ppb at the property boundary. Levels of VOCs found off-site range from 1,000 ppb at the property line to 11 ppb, 250 feet downgradient, on the NYSDOT facility. 1,2 Dichloroethene is the most prevalent VOC found at and off the site.

Twenty-eight groundwater samples were collected between March 1990 and April 1991. Additional [illegible] 1996 and 1997 [illegible] groundwater quality and flow at the site. The following VOCs have been identified in the groundwater above [illegible] ethylbenzene, and xylene (total)(8 ppb to 6,000 ppb). Also Bis(2-ethylhexyle phthalate, Di-n-butyl phthalate, Dichlorobenzene, Diethyl phthalate, 2-Methyl napthalene, Napthalene and PCBs (Aroclor 1254) were found at low levels above standards. Contaminated groundwater is flowing in a south, southwest [illegible] site are in the range of non-detect to 1,000 ppb.

Six deep overburden soil borings were installed at the site. Groundwater samples were collected from three of the six deep locations. Groundwater northeast of the burn pit (Deep-1) did not show any detectable levels of VOCs. Monitoring well, Deep-4, which was located within the former burn pit showed 1,2-DCE (total) concentration of 5.5 (ppb), trichloroethene (TCE) concentration of 33 (ppb), and toluene concentration of [illegible] (ppb). [illegible] (ppb).

3.1.3 (d) Air

[illegible] contamination is not likely.

3.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) were conducted based upon the initial site investigation performed in 1990. An IRM is implemented when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

An IRM was conducted at the site [illegible] through 1994. The IRM [illegible] excavation of approximately 2,300 cubic yards of soil from the former burn pit located at the West Lot site. The excavated [illegible] extraction (SVE). Treatment of these soils concluded in 1996. The soils currently are staged within the cell awaiting disposal. These soils are still contaminated with PCBs at levels up to 200 ppm.

3.3 Summary of Human Exposure Pathway

This section describes the types of human exposure that may present added health risks to persons at or around the site. A more detailed discussion can be found in the Remedial Investigation.

An exposure pathway is [illegible] of an exposure pathways are: 1) source of contamination; 2) environmental media and transport mechanisms;

- Inhalation of dust from excavation of soil at the burn pit.
- Accumulation of vapors containing VOCs in buildings built over or near the contaminated groundwater plume.

The site is not within a secure or active facility and control over current and future use is not restricted at this time. The site is not fenced and trespassers may come in contact with contaminated soils which remain in the vicinity of the burn pit.

contaminated groundwater and organic vapors. Accumulation of vapors in and around building foundations may also be a potential given the high levels of VOCs migrating on to the NYSDOT facility.

3.4 Summary of Environmental Exposure Pathways:

Exposure pathways for environmental receptors are possible through contact with, and ingestion of, contaminated soils and groundwater. The most significant contaminates of concern are VOCs and PCBs.

reach the Sauquoit Creek.

SECTION 4: ENFORCEMENT STATUS

The NYSDEC and Martin Marietta Corporation entered into a Consent Order (#A6-0311-93-11) on December 15, 1993. The Order obligated the responsible party to implement a Remedial Investigation/Feasibility Study and Interim Remedial Measure Program. Upon issuance of the Record of

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

NYCRR Part 375-1.10. The overall remedial goal is to restore the site to pre-disposal conditions, to the extent feasible and authorized by law.

to the environment presented by the hazardous wastes disposed of at the site through the proper application of scientific and engineering principles.

- Prevent further migration of contaminant to groundwater.
- Eliminate the threat to surface waters by eliminating or mitigating any future contaminated groundwater discharging to downgradient streams.
- Eliminate the potential for direct human or animal contact with the contaminated soils on site.
- Prevent, to the extent possible, migration of contaminants in the burn pit to groundwater.
- Mitigate off-site impacts and restore all groundwater quality to meet SCGs in a timely manner.

SECTION 6: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for the GE West Lot site were identified, screened and evaluated in the Feasibility Study. This evaluation was initially presented in the report entitled Feasibility Study Report, dated July 14, 1997 and prepared by SECOR International, Inc.. As a supplement to the FS, Blasland, Bouck & Lee submitted a report entitled Feasibility Study Report Supplement, dated January 1998. Alternative #6 was provided in this report and is presented in the following section.

A summary of the detailed analysis follows.

6.1: Description of Alternatives

The description below addresses the alternatives which have been developed to address the contaminated soils associated with the GE West Lot site. The potential remedies are intended to address the contaminated soils and groundwater found at the site.

Alternative 1- Limited Action

requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would include a combination of site controls to prevent human and biota exposure to the compounds of concern remaining on the site and long-term monitoring program.

Security fence would be erected to enclose the impacted area and signs would be placed to describe the area and to deter trespassing.

Additional monitoring would be performed to ensure that security was maintained and to define groundwater migration.

and therefore is not acceptable

Present Worth: $ 161,541

Capital Costs: $ 0

Annual O&M: $ 15,000

Alternatives 2 through 6

component of each of the alternatives is the removal VOC and PCB contaminated soils located in the treatment cell and surrounding the [illegible]. The [illegible] cubic yards of soil in the treatment cell and approximately 870 cubic yards of soil remaining in the vicinity of the burn pit which [illegible] cleanup goals. All soils exceeding clean up goals are proposed to be excavated treated (if necessary) and taken off site for disposal. All soils are proposed to be transported to a permitted hazardous waste landfill or permitted solid waste landfill. Verification sampling would be conducted to ensure cleanup goals are achieved. Once the soils are removed, the treatment cell would be dismantled and the treatment cell and the burnpit area would be backfilled, graded and a vegetative cover established.

Alternative 2 - Collection/Treatment and Discharge to POTW

This alternative combines groundwater extraction, on-site physical treatment, and discharge to the publicly [illegible] treatment works (POTW). Monitoring of groundwater downgradient of the site, as described under [illegible] alternative, would also be included.

This alternative would include the installation of a series of recovery wells installed along the southern side of the former burn pit in order to capture contaminated overburden groundwater. Approximately 4 wells would be installed 75 feet on center from approximately the old railroad bed extending east to the edge of the West Lot parking lot. Each well would be installed to a depth of the glacial till layer or about 35 feet deep. Collected waters would be treated on site utilizing bulk phase air stripping system and polished by carbon in order to meet pretreatment standards as designated by the Oneida County POTW.

Present Worth:	$ 1,355,754
Capital Costs for [illegible]	$ 200,000
Groundwater System:	$ 200,000
Capital Costs for Soil Removal:	$ 710,200
Annual O&M Costs for the first 10 years:	$ 60,000
Annual O&M Costs for 5 years of post remediation monitoring:	$ 15,000

Alternative 3 - Collection/Treatment and On-Site Discharge

Alternative #3 combines groundwater extraction, on-site treatment and on site discharge via subsurface injection wells or an infiltration gallery. The Description of Alternative #3 is the same as Alternative #2 except that the collected water would be discharged on site rather than to the POTW. A higher level of treatment may be required if waters would be injected outside the area of capture. The time to run this system is slightly less than Alternative #2, due to the injection of clean groundwater back into the groundwater

system, which would slightly enhance biological conditions and provide flushing of contamination toward recovery points.

Present Worth:	$ 1,296,115
Capital Costs for Groundwater System:	$ 220,000
Capital Costs for Soil Removal:	$ 710,200
Annual O&M Costs for the first 8 years:	$ 60,000
Annual O&M Costs for 5 years of post remediation monitoring:	$ 15,000

Alternative 4 - In Situ Treatment using Air Sparging

Alternative #4 is based on the physical removal of dissolved VOCs via mass transfer in situ. A series of [illegible] Gas would dissipate at the surface of the ground. It is anticipated that 12 air sparging wells spaced 50 feet [illegible] in the site as determined under the unused seven alternative would also be included.

Present Worth:	$ 1,015,579
Capital Costs for Groundwater System:	$ 150,000
Capital Costs for Soil Removal:	$ 710,200
Annual O&M Costs for the first 5 years:	$ 30,000
Annual O&M Costs for 5 years of post remediation monitoring:	$ 15,000

Alternative 5 - In Situ Treatment Using Chemical Oxidation

Alternative #5 consists of injecting oxidant, (usually hydrogen peroxide) into the aquifer to chemically oxidize VOCs in the groundwater. The pre-diluted technical grade hydrogen peroxide would be stored on [illegible] be injected. It is estimated that a period of two years would be required for injections in order to dissipate the area effected by the highest levels of VOCs.

Present Worth:	$ 888,000
Capital Costs for Groundwater System:	$ 110,000
Capital Costs for Soil Removal:	$ 710,200
Annual O&M Costs for the first 2 years:	$ 20,000
Annual O&M Costs for 5 years of post remediation monitoring:	$ 15,000

toward downgradient receptors.

Present Worth:	$ 1,148,105
Capital Costs for Groundwater System:	$ 191,500
Capital Costs for Soil Removal:	$ 710,200
Annual O&M Costs for the first 4 years:	$ 59,800

remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375). For each of the criteria, a brief description is provided, followed by an evaluation of the alternative against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study. The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection. The last five evaluation criteria are termed "primary balancing criteria" and are used to compare the positive and negative aspects of each alternative.

Alternative #1 would not meet SCGs for groundwater in a timely manner. Under this alternative no removal

All remaining alternatives may eventually meet SCGs for groundwater, assuming that the remedies would be effective in removing contamination.

hazardous waste landfill.

adjacent property which is present in active use.

Alternatives #2, #3, #4, #5, and #6 could be considered to be protective, assuming that such alternative is effective in minimizing exposure to contaminants.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternative #1 would not cause any short term impacts due to the lack of disturbance of the site.

The remaining alternatives could create potential short term impacts from the installation and construction of groundwater collection and treatment systems due to worker and public exposure to soils, dust and noise. These impacts could be minimized by implementing engineering controls, monitoring, monitoring air monitoring, the wearing of protective equipment, and decontamination of equipment prior to leaving the site, and engineering controls including covering excavated soils and installing sediment migration barriers to keep contaminants from migrating beyond the work site boundaries.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following issues are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative #1 would not provide long-term effectiveness or permanence due to the continued migration of contaminated groundwater.

Alternatives #4 and #5 would have a greater degree of effectiveness or permanence in comparison to Alternatives #2, #3, and #6 because they would provide an active treatment versus containment. However, some additional environmental controls would be required for Alternatives #4 and #5 in order to prevent the further spread of contaminated groundwater off site during the in-situ treatment period.

There remains uncertainties regarding the effectiveness of all groundwater cleanup remedies proposed in the remedial alternatives. Additional testing would be required to further evaluate the effectiveness of each alternative.

5. Reduction of Toxicity, Mobility, or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility, or volume of the contaminants as a principal element.

Alternative #1 would not provide any reduction in toxicity, mobility, or volume of contaminants in the groundwater. The remaining alternatives would provide a reduction in toxicity, mobility, or volume of contaminants in the groundwater; therefore, they are all considered to provide the same degree of reduction.

6. Implementability. The ease or difficulty of implementing each alternative is evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to

access for construction, etc..

contractors are readily available, the technology is reliable and the no delays are anticipated technically or administratively.

In addition, further controls may be required to prevent further off site migration during the in situ treatment period.

subsequently implimentable.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 3.

8. Community Acceptance. Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan are evaluated. A "Responsiveness Summary" included in Appendix C presents the public comments received and the Department's responses to the concerns. In general the public comments received were supportive of the selected remedy. Comments received from the Oneida County Sewer District did require the proposal to be modified. The PRAP called for discharge of collected groundwater to the POTW for further treatment. Because the Oneida County POTW does not have the capacity to accommodate the collected groundwater, all water will be treated on site to meet discharge standards and then discharged to Nail Creek or to an on-site infiltration gallery. This does not change the overall intent of the Department's selected remedy. Alternatives # 2 and # 3 are essentially the same, except # 2 requires off site disposal and # 3 requires on-site treatment of contaminated groundwater. Lockheed Martin submitted a substantial quantity of comments, however they concluded that the Department's approach pertaining to the development of a system during the preliminary design phase, was acceptable. Responses, which were of more general in nature.

Based upon the results of the RI/FS, and the evaluation presented in Section 6, the NYSDEC is selecting

number, size and location of pumping wells. The exact size of the system will be determined during a

constraints.

upon the Feasibility Study, approximately 2,200 and 870 cubic yards of soils will be removed from the treatment cell and burn pit area, respectively. The soils will be stock piled and characterized for off-site disposal at either a permitted solid waste or hazardous waste landfill. The excavated area will be backfilled and revegetated, once confirmatory soil samples verify that cleanup goals were achieved.

- Overburden pumping wells will be installed to capture the high concentrations of VOCs in the overburden groundwater downgradient of the burn pit (Alternative #3). At least one additional pumping well located along the axis of the plume may be needed to maximize practical containment of the plume. The number, location and spacing of wells will be determined during the remedial design. The design goals will be to restore contaminated groundwater to groundwater quality standards within the shortest time technically feasible and to protect down gradient receptors.

- The groundwater collection and treatment system will treat contaminated groundwater in order to meet discharge standards to adjacent surface water or to discharge to an on site infiltration system.

- As part of the monitoring program, it will have to be assessed to evaluate the effectiveness of the system over time. Additional groundwater clean up remedies or controls may need to be evaluated based on the effectiveness of the groundwater pumping system.

- Additional monitoring wells will be installed to track and monitor the bedrock aquifer and to determine if future remedial activities are warranted to address deep or down gradient impacts. Monitoring will also be required to ensure that downgradient surface water is protected.

Monitoring and maintenance will be required for the groundwater collection and treatment system to ensure proper operations, regulatory compliance and protection of human health and the environment.

A remedial design program will be undertaken to develop the final design plans necessary for the construction, implementation and maintenance, and monitoring of the remedial program. Any additional issues identified during the RD/RA will be resolved.

The estimated present worth cost to implement the proposed remedy is $1,206,116. The cost to construct the remedy is estimated to be $970,000 and the estimated annual operation and maintenance cost is estimated to be $60,000 for the first 8 years and $15,000 for year 9 through 13. Additional costs may be encountered during the remedial design program as additional data is collected to refine the remedial action alternatives. A major assumption concerning number, location and spacing of extraction wells. The cost estimates are based on current understanding of site conditions, conceptual models and best estimates. Field condition encountered during construction, groundwater modeling may change conditions, may result in costs differences from projected estimates.

The following is the basis for the Department's selection:

- Compared to the remaining alternatives, the Department's proposal would obtain remedial goals during the shortest time, while utilizing proven and cost effective technologies. Compared to the other alternatives, the Department's proposal would eliminate contaminant migration from the wells, would provide the highest level of protection, and would remain long-term for human health and the environment.

- The excavation of all soils and waste containing VOCs and PCBs above NYSDEC soil clean up goals would permanently remove contaminated media from the environment and reduce loading of VOCs and PCBs to the groundwater.

- Off-site disposal of these wastes and soils at a secure solid waste or hazardous waste landfill would properly contain these materials in an approved long-term secure facility.

- The removal of soils and waste would meet SCGs and Remedial Action Objectives, permanently reduce the toxicity, mobility or volume of wastes, to the extent practicable, and would eliminate the environmental

- The installation of pumping wells would control contaminant migration and prevent

- The installation of pumping wells would prevent contaminated overburden groundwater from migrating into the bedrock aquifer.

- The installation of downgradient deep and shallow monitoring wells would detect if contamination is spreading in the overburden or bedrock aquifer. Additional remedial actions may be required if needed to protect human health and the environment.

- [illegible] that the selected remedy is cost-effective. Based upon the assessments listed above,

SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the GE West Lost Site remediation process, a number of Citizen Participation (CP) activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- A repository for documents pertaining to the site was established

- A site mailing list was established which included nearby property owners, local politicians, [illegible] and other interest parties.

- A public meeting was held to discuss the characteristics of the site and the proposed remedy, and to answer any questions raised.

- A responsiveness summary was prepared to address [illegible] received during the public comment period.

APPENDIX A

- Toxic Substance Control Act (TSCA)
- USEPA Health Based Soil Criteria for Systemic Toxicant and Carcinogens

New York State Department of Environmental Conservation (NYSDEC)

Hazardous Waste Technical and Administrative Guidance Memoranda (TAGMs)

- TAGM 4046 - Determination of Soil Cleanup Objectives and Cleanup Levels
- Hazardous Waste Sites
- 6NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- 6NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporter, and Facilities
- 6NYCRR Part 360 - Solid Waste Management Facilities
- 6NYCRR Part 364 - Waste Transporters Permits

NYSDEC - Division of Water

- 6NYCRR Part 700-705 - Water Quality Regulations for Surface Water and Groundwater
- 6NYCRR Part 750-757 - Implementation of NYPDES in New York State
- Technical and Operation Guidelines (TOGS) 1.1.1-Ambient Water Quality Standards and Guidance Values

NYSDEC - Division of Fish and Wildlife

- Technical Guidance for Screening Contaminated Sediments (Nov 1993)

Occupational Safety and Health Administration

- 29 CFR 1900-1999

Groundwater	Volatile Organic Compounds	Tetrachloroethylene	Non Detect - 14,000 ppb	5 out of 26	5 ppb
		Trichloroethene	Non Detect - 830 ppb	8 out of 26	5 ppb
		1,2-Dichloroethene	Non Detect - 420,000	13 out of 26	5 ppb
		Vinyl Chloride	Non Detect - 3,500 ppb	9 out of 26	5 ppb
		Toluene	Non Detect -6,100 ppb	5 out of 26	5 ppb
		Ethylbenzene	Non Detect -340 ppb	7 out of 26	5 ppb
		Xylene	Non Detect - 1,400 ppb	7 out of 26	5 ppb
		Benzene	Non Detect - 14 ppb	1 out of 26	0.7 ppb
	PCBs	Total PCBs	Non Detect - 0.7	1 out of 26	0.1 ppb
	Volatile Organic Compounds	Ethylbenzene	Non Detect - 20 ppb	1 out of 3	5 ppb
		Trichloroethene	Non Detect - 33 ppb	1 out of 3	5 ppb
		Toluene	Non Detect - 130 ppb	1 out of 3	5 ppb
Soils	Polychlorinated Compounds	PCB	Non Detect - 340,000 ppb	1 out of 20	10,000 ppb
	Volatile Organic Compounds	Tetrachloroethylene	Non Detect 16,000 ppb	1 out of 20	1,400 ppb
		Toluene	Non Detect - 150,000 ppb	1 out of 20	5,000 ppb
		Xylene	Non Detect -710,000	1 out of 20	1,200 ppb

* SCG's for groundwater is standard 6 NYCRR Part 703
SCG's for soil is objectives in NYSDEC TAGM 4046

Remedial Alternatives Costs

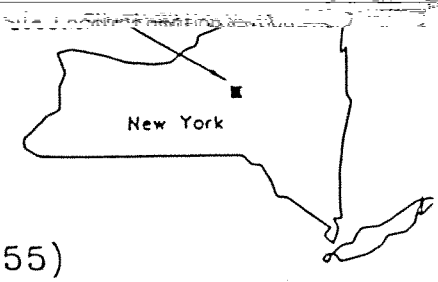
Remedial Alternative	Capital Costs	Annual O&M	Total Present Worth
Alternative #1 Limited Action	$ 0.00	$ 15,000 - 0 to 30 years	$ 181,541
Alternative # 2 Collect Treat/Discharge to POTW	$ 200,000 - Groundwater $ 710,200 - Soil	$ 60,000 - 0 to 10 years $ 15,000 - 11 to 15 years	$ 1,355,754
Alternative # 3 Collect Treat/Discharge on Site	$ 220,000 - Groundwater $ 710,200 - Soil	$ 60,000 - 0 to 8 years $ 15,000 - 9 to 13 years	$ 1,296,115
Alternative # 4 In-Situ Treatment - Air Sparging	$ 150,000 - Groundwater $ 710,200 - Soil	$ 60,000 - 0 to 5 years $ 15,000 - 6 to 10 years	$ 1,015,579
Alternative # 5 In-Situ Oxidation	$ 110,000 - Groundwater	$ 60,000 - 0 to 2 years	$ 888,000
Alternative # 6 Supplemental Groundwater Alternative	$ 191,500 - Groundwater $ 710,200 - Soil	$ 59,800 - 0 to 4 years $ 15,000 - 5 to 10 years	$ 1,148,105

Source removal of soils within the burn area/trench would be required under each alternative.

APPENDIX B

Scale: 1:24,000

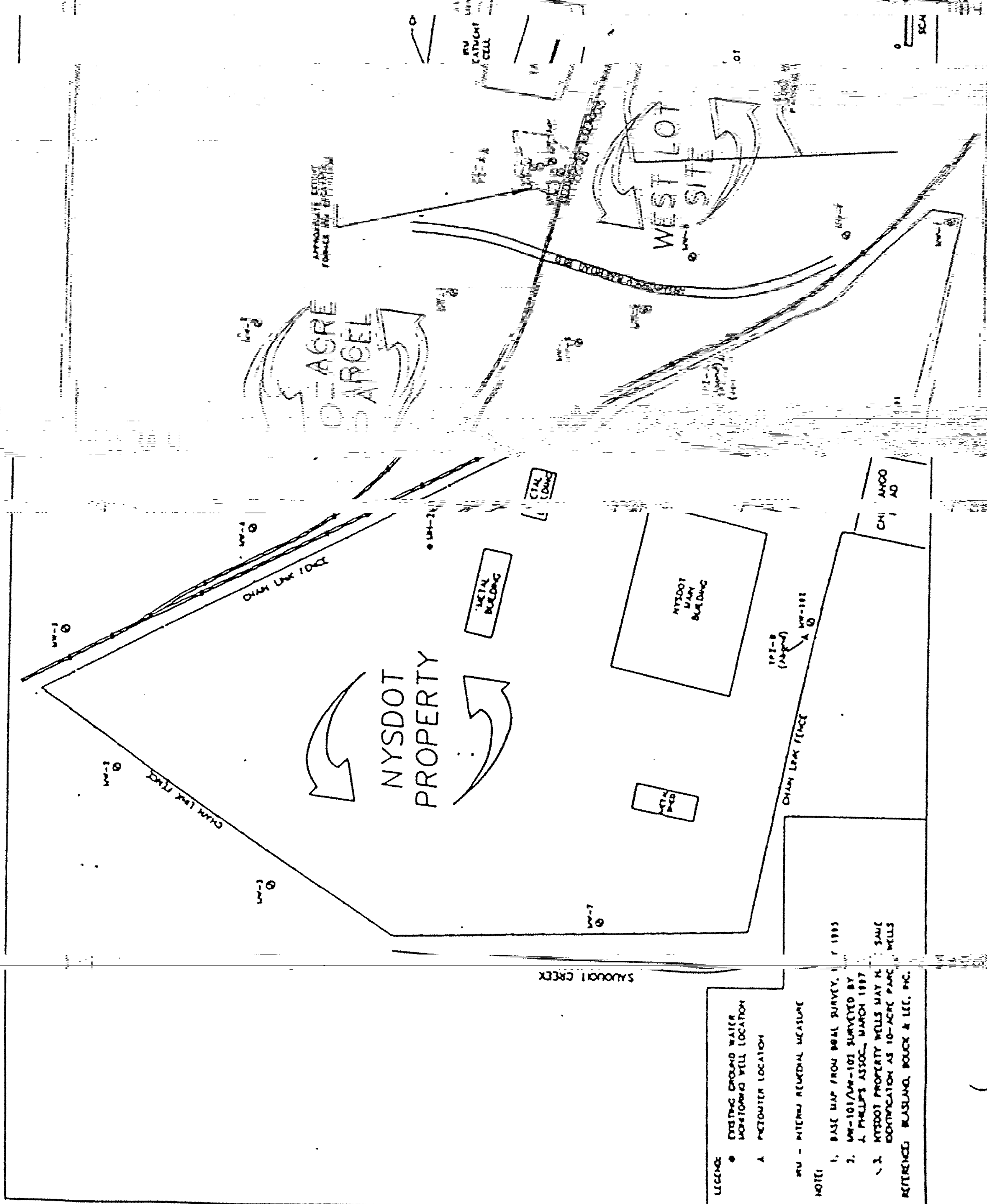
Miles			Feet	
1/2	1/4	0	1000	2000



Source:
United States Geological Survey
7.5-Minute Series (Topographic)
Quadrangle Map

Utica – West, NY (1955)

SECOR International, Inc.	Figure 1 – Site Location Map West Lot Project Area		Former Lockheed Martin Corp. Facility 525 French Road Utica, Oneida County, New York, 13502 LOCATION:
4514 West Genesee Street	Burbank Program Office		
(315) 454-7674			



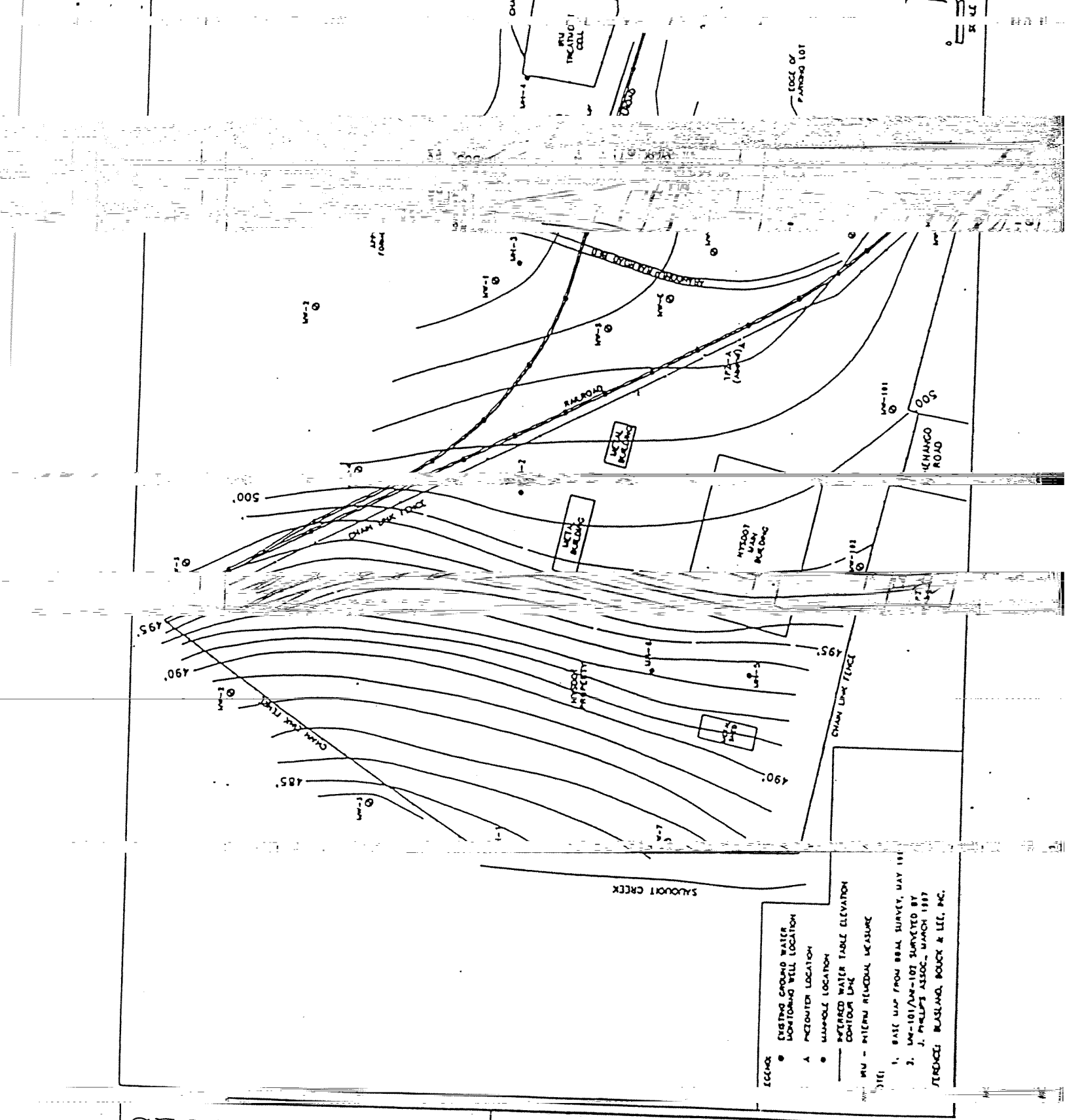
WEST LOT PROJECT AREA

SITE PLAN

FIGURE 2

SECOR
4914 WEST GENESEE ST.
CAMILLUS, NEW YORK 13031
(315) 484-7874
(315) 484-0798 Fax

LOCKHEED MARTIN CORPORATION
BURBANK PROGRAM OFFICE
"WEST LOT PROJECT AREA"
UTICA, ONEIDA COUNTY, NEW YORK



SECOR

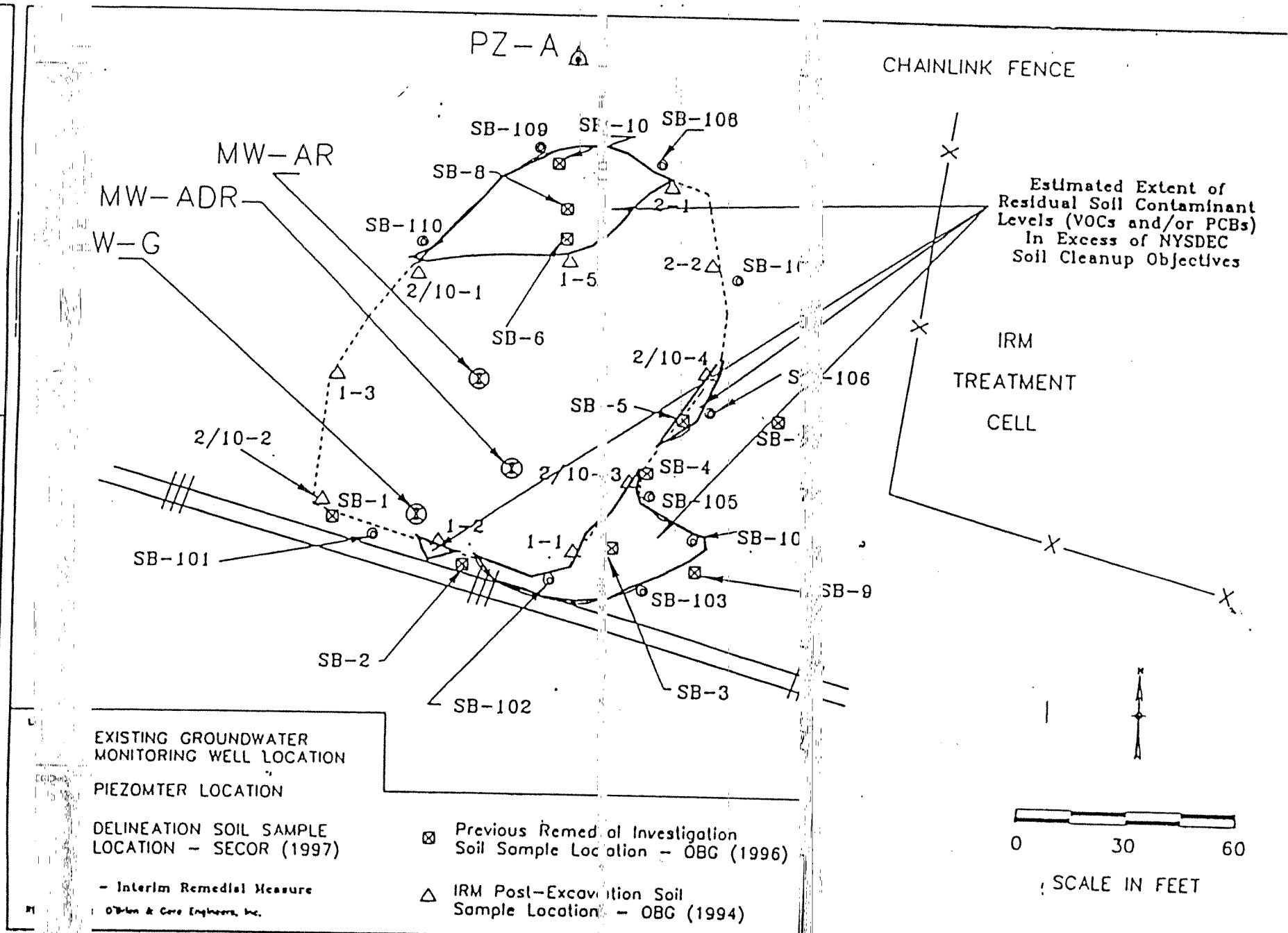
INFERRED WATER TABLE GRADIENT MAP
04 MARCH 1997

FIGURE 2

4914 WEST GENESEE ST.
CAMILLUS, NEW YORK 13031
(315) 484-7874
(315) 484-0298 Fax

LOCKHEED MARTIN CORPORATION
BURBANK PROGRAM OFFICE
WEST LOT PROJECT AREA
[illegible] COURT, NEW YORK

PREPARED BY: CADD-PJ | FILE NAME: LOCKHEED | DATE: 4/23/97



SECOR

4914 WEST GENESEE STREET
CAMILLUS, NEW YORK 13031
(315) 484-7874
(315) 484-0298 Fax

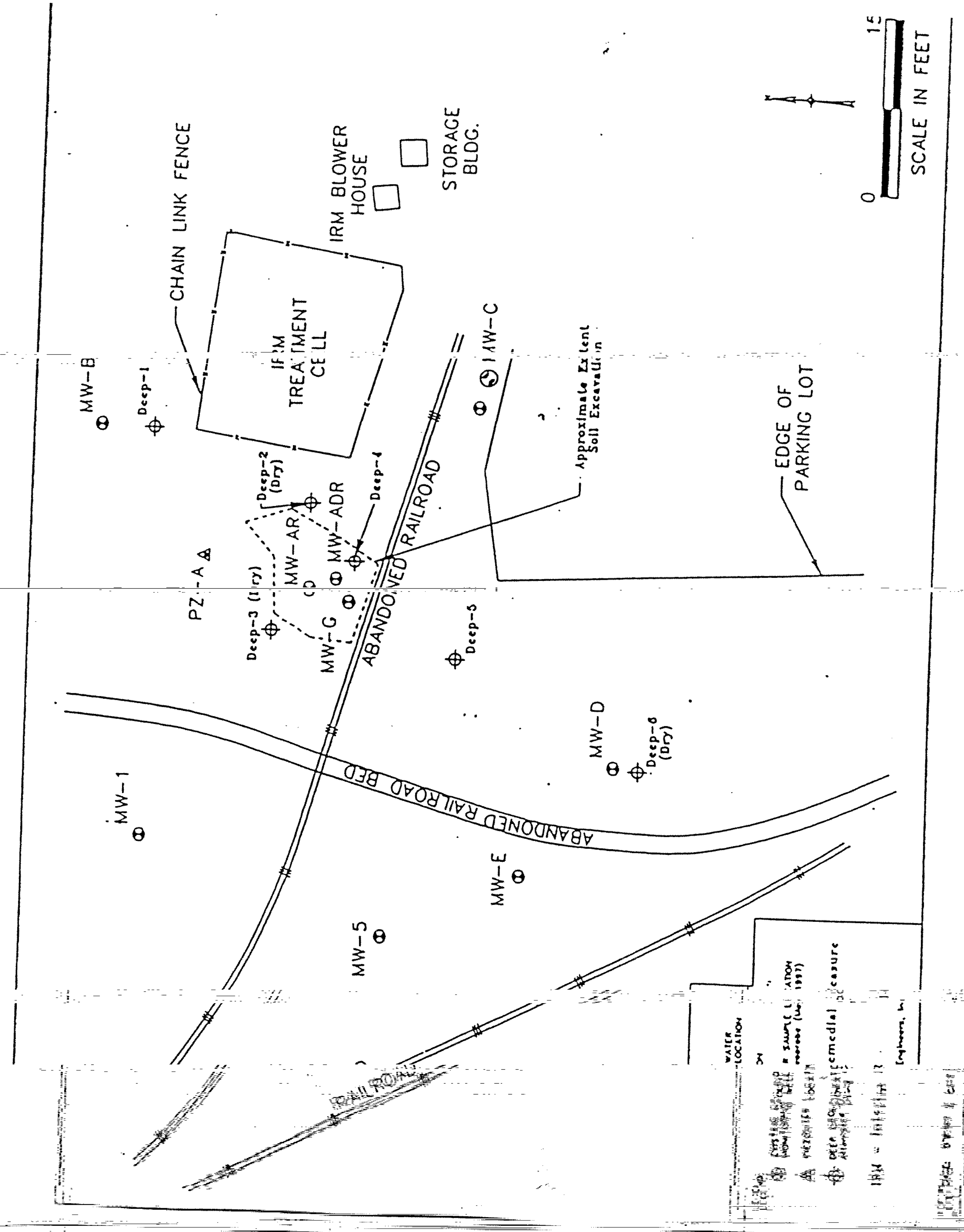
CLIENT: LOCKHEED MARTIN CORP.
BURBANK PROGRAM OFFICE
2550 N. HOLLYWOOD WAY
BURBANK, CA 91505

LOCATION: FRENCH ROAD FACILITY
525 FRENCH ROAD
UTICA, ONEIDA COUNTY, NY 13502

FORMER "BURN PIT" AREA
Delineation Soil Sample Locations

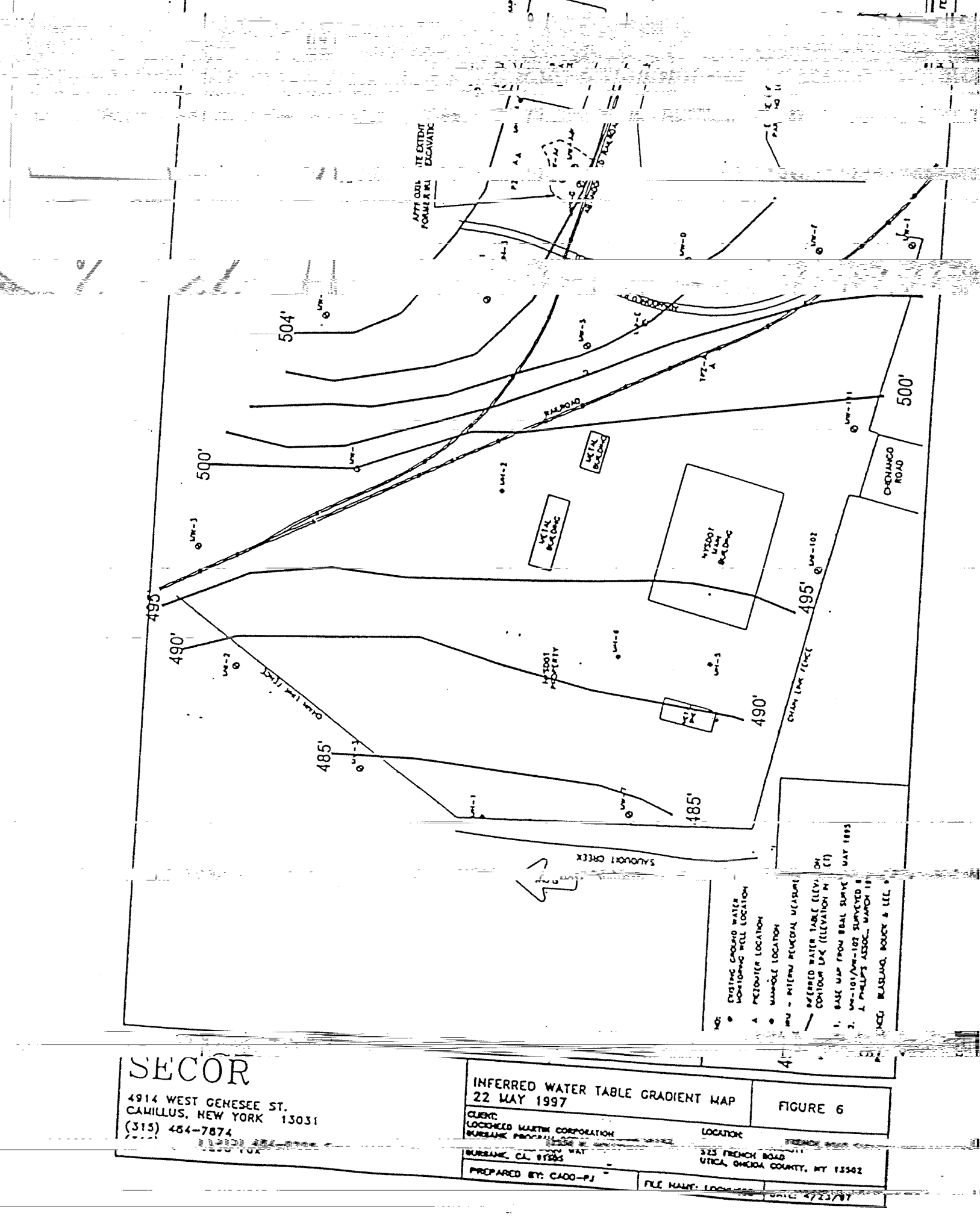
FIGURE 4

DRAWN	JOB/SITE NO.	DATE
		4/23/97



SECOR
4914 WEST GENESEE STREET
(315) 484-7874
(315) 484-0298 Fax

WEST LOT PROJECT AREA Till Layer Groundwater Sample Locations		FIGURE 5
CLIENT: LOCKHEED MARTIN CORP. BURBANK PROGRAM OFFICE 2550 N. HOLLYWOOD WAY BURBANK, CA 91505		LOCATION: FRENCH ROAD FACILITY 525 FRENCH ROAD UTICA, ONEIDA COUNTY, NY 13502
REVISED BY: JPS (5/97)	ASKETCH: IRMEXCV.SKD	DATE: 4/23/97



SECOR

4914 WEST GENESEE ST.
CAMILLUS, NEW YORK 13031
(315) 484-7874

INFERRED WATER TABLE GRADIENT MAP
22 MAY 1997

FIGURE 6

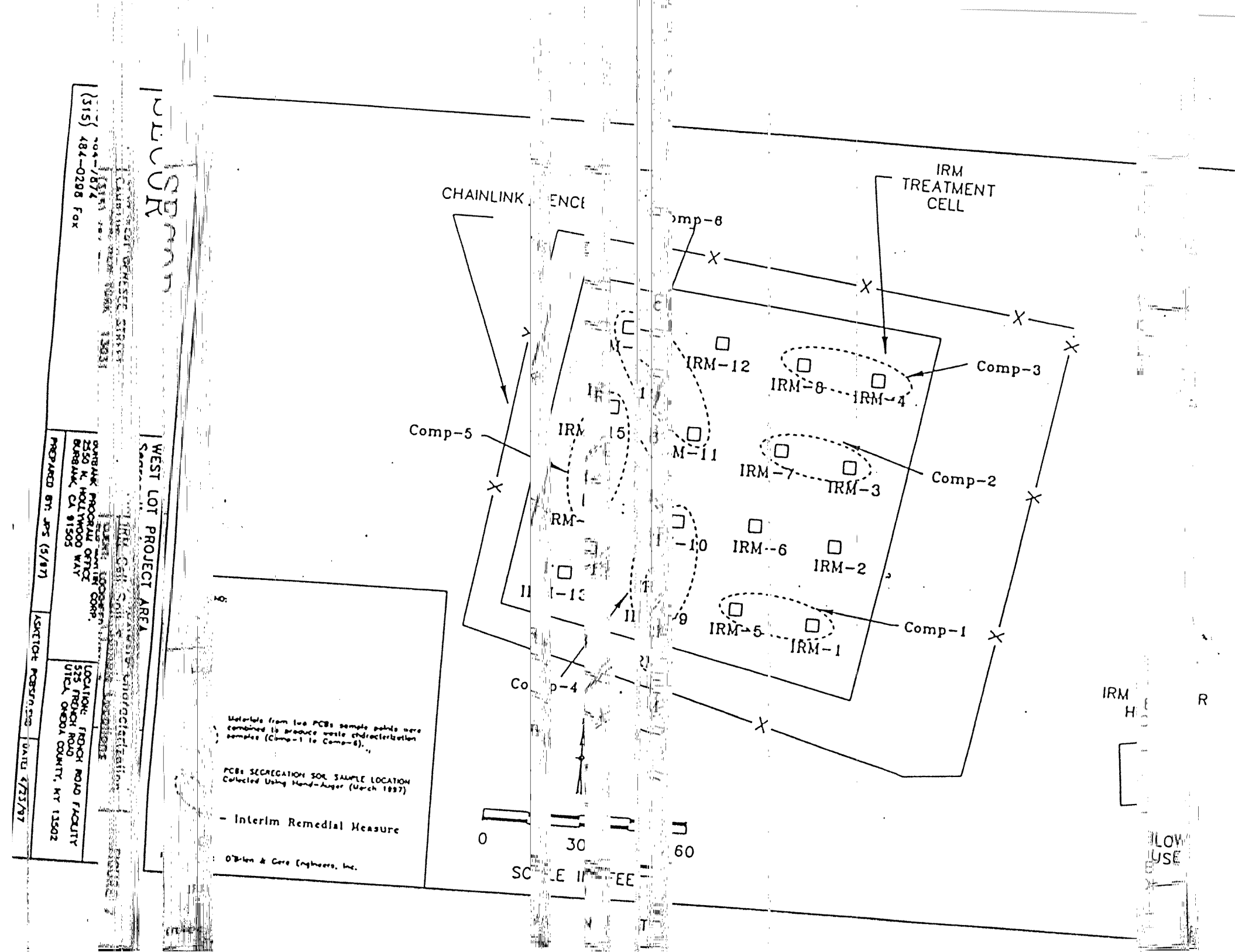
CLIENT:
LOCKHEED MARTIN CORPORATION
BURBANK PROPERTY
BURBANK, CA. 91505

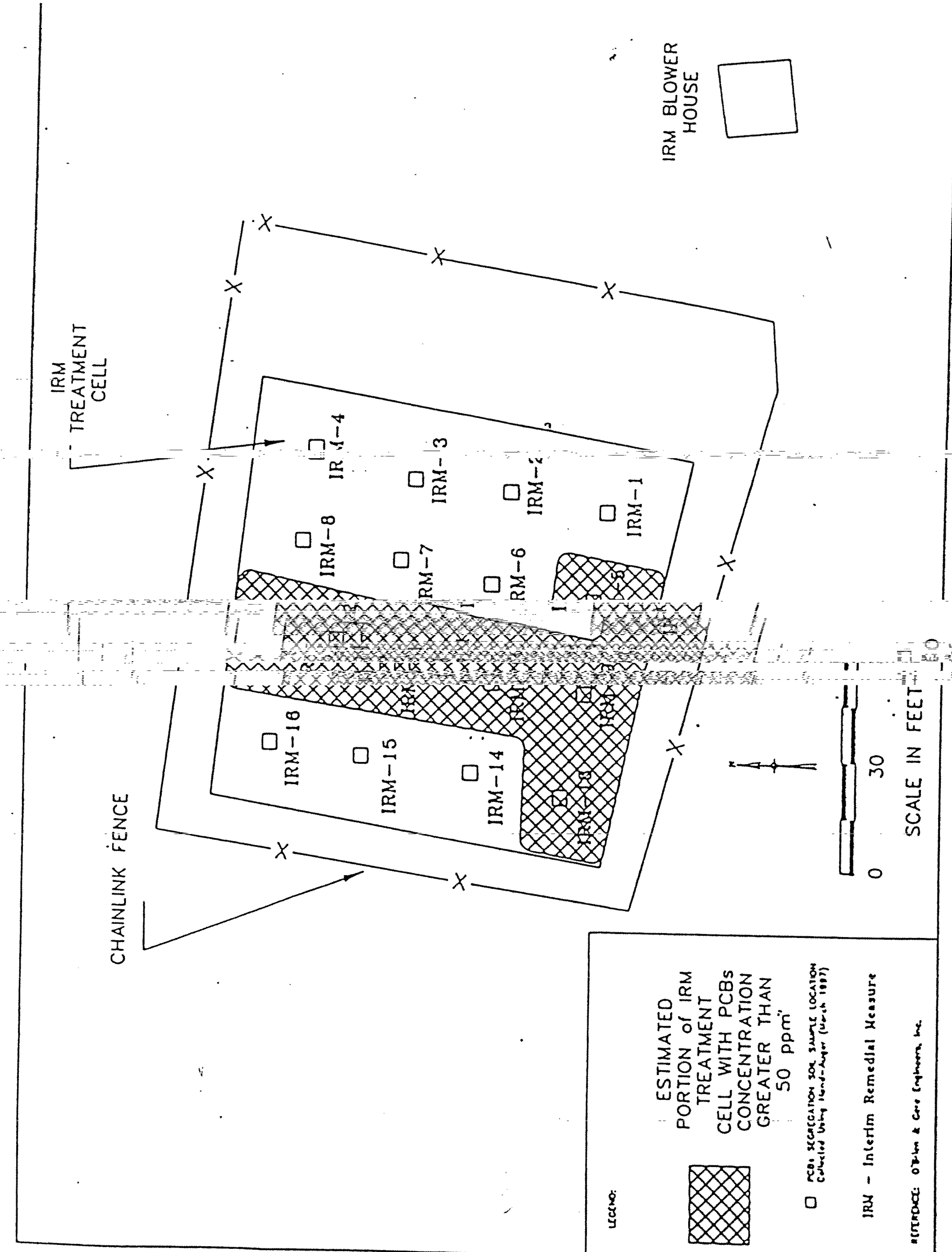
LOCATION:
323 FRENCH ROAD
UTICA, OHEIDA COUNTY, NY 13502

PREPARED BY: CADD-PJ

FILE NAME:

DATE: 6/23/97


CHAINLINK FENCE
IRM TREATMENT CELL
Comp-6
Comp-5
Comp-4
Comp-3
Comp-2
Comp-1
IRM-12
IRM-8
IRM-4
IRM-11
IRM-7
IRM-3
IRM-10
IRM-6
IRM-2
IRM-5
IRM-1
WEST LOT PROJECT AREA
Waterials from two PCBs sample points were combined to produce waste characterization samples (Comp-1 to Comp-6).
PCBs SEGREGATION SOIL SAMPLE LOCATION Collected Using Hand-Auger (March 1997)
- Interim Remedial Measure
O'Brien & Gere Engineers, Inc.
0
30
60
SCALE IN FEET
DURBANK PROGRAM OFFICE
2350 N. HOLLYWOOD WAY
BURBANK, CA 91505
PREPARED BY: JPS (5/97)
LOCATION:
525 FRENCH ROAD
UTICA, ONEIDA COUNTY, NY 13502
DATE 4/23/97
(315) 484-0298 Fax



SECOR
4914 WEST GENESEE STREET
CAMILLUS, NEW YORK 13031
(315) 484-7874
(315) 484-0298 Fax

WEST LOT PROJECT AREA
Estimated Portion Of IRM Cell Requiring Disposal as "Hazardous Waste"

FIGURE 8

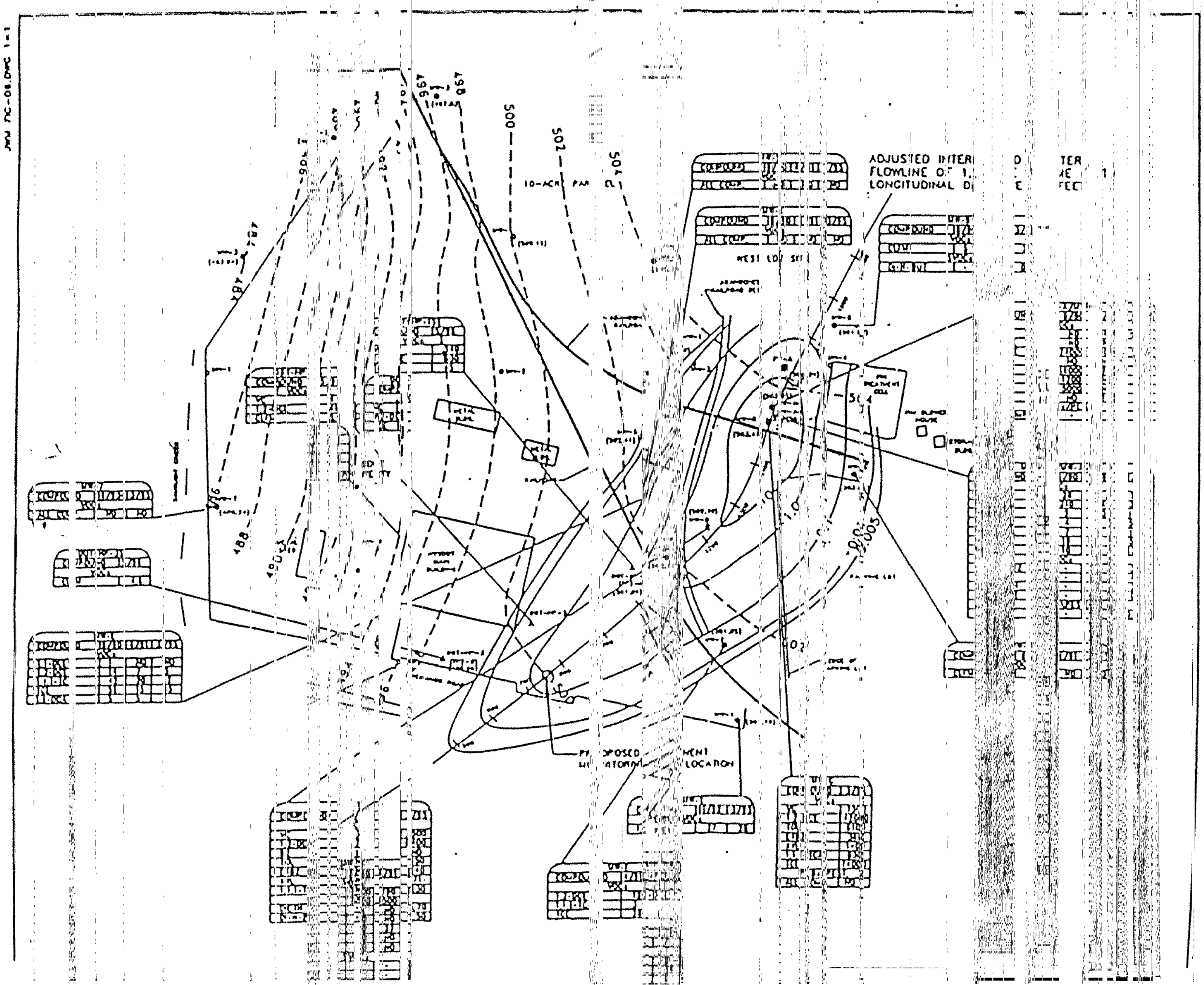
CLIENT: LOCKHEED MARTIN CORP.
BURBANK PROGRAM OFFICE
2550 N. HOLLYWOOD WAY
BURBANK, CA 91505

LOCATION: FRENCH ROAD FACILITY
525 FRENCH ROAD
UTICA, ONEIDA COUNTY, NY 13502

PREPARED BY: [illegible]
FILE: PCBSEG.SKD
DATE: 4/23/97

APPENDIX C

FIGURE 7



LEGEND

- MANHOLE LOCATION
- EXISTING GROUND-W... MONITORING WELL
- PIEZOMETER
- HYDROPUNCH LOCA...
- 0.01 —— SIMULATED 1,2-DCE ... CONTOUR (mg/L)
- GROUND-WATER ELE... (FEET)(MAY 22, 199...
- 502 — — GROUND-WATER ELE... CONTOUR LINE (FEE...

NOTES:

LOCKHEED MARTIN CO...
WEST LOT SITE–UTICA, N.Y.
REMEDIAL INVESTIGATI...
REPORT ADDENDUM

ADJUSTED SOLUTE-TRANSP...
MODEL PLUME AND PROPO...
MONITORING WELL LOCATI...

200 0 200
SCALE

FILE NO. 5526.050-06F