CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 93-074

SITE CLEANUP REQUIREMENTS FOR:

CHEVRON U.S.A. PRODUCTS COMPANY

STONESTOWN GALLERIA

FOR THE PROPERTY AT:

3451 19TH AVENUE, SAN FRANCISCO, SAN FRANCISCO COUNTY

FINDINGS:

The California Regional Water Quality Control Board, San Francisco Bay Region (herein after called the "Regional Board") finds that:

1. Chevron U.S.A. Products Company (hereinafter called the "Discharger") leased and operated a retail gasoline station until 1987 (Chevron Station #9-6235) at 3451 19th Avenue, San Francisco, San Francisco County (the "Site"). A site location map is provided in Figure 1.

2. The Stonestown Galleria (hereinafter called the "Discharger") owns the property at 3451 19th Avenue, San Francisco, San Francisco County.

3. According to San Francisco Public Health Department and Regional Board staff files, four underground storage tanks were located at the subject site, shown in Figure 2. Three of the four tanks are were used for storing petroleum hydrocarbons for retail sale. The fourth tank was used for storing waste oil. Chevron demolished the station and removed the four underground storage tanks in August 1987.

4. In 1988, seven groundwater monitoring wells were installed. One monitoring well contains free phase hydrocarbons. Monitoring well, C-2, has consistently detected free phase hydrocarbons since January 1989. As much as 3.72 feet of free product has been observed (fourth quarter monitoring report 1989). A passive skimmer was installed in April 1992 as an interim measure for removal of free product.

   As of the most recent monitoring report dated March 17, 1993, about .28 feet of free product was measured in well C-2. In the same report, benzene was found to be as high as 440 ppb (monitoring well 11). Three of the monitoring wells indicate that the groundwater contains high levels of dissolved total

petroleum hydrocarbons as gasoline (up to 45,000 ppb TPH-g) and related BTEX constituents (benzene 7,500 ppb, toluene 2900 ppb, ethylbenzene 1,100 ppb, and xylene 5,500 ppb).

5. To date, neither the soil nor the groundwater plumes have been fully defined. pollution has not been fully characterized.

6. One well, C-3, contains evidence of solvent contamination. In December 1989 140 ppb of 1,2 DCE was detected.

7. No interim remedial measures have been taken since June 1992 to halt the migration of polluted groundwater. The Discharger's failure to take action has most likely led to spreading of pollution within the aquifer.

8. Due to the fact that the pollution occurs within a critical drinking water aquifer, the Merced Formation, the Regional Board Staff have found it necessary to prepare this order.

9. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) in December 1991. Proposed Basin Plan Amendments were adopted by the Regional Board in September and October 1992 and are awaiting State Board approval. The Basin Plan and amendments contain water quality objectives and beneficial uses for the central San Francisco Bay and contiguous surface and groundwater.

10. Within this area, groundwater consistently flows in a northwesterly direction towards Lake Merced, approximately 2,000 feet away. Lake Merced is in hydraulic connection with the Merced Formation. This aquifer is currently utilized by the Daly City Water Department for drinking water. Additionally, potential beneficial uses of this groundwater zone underlying and adjacent to the Site include:

    a. Industrial process water supply
    b. Industrial service water supply
    c. Municipal and Domestic water supply
    d. Agricultural water supply
    e. Irrigation of parks and public areas
    f. Water supply for San Francisco's emergency fire suppression system

11. The nearest surface water body to the site, approximately 2,000 feet away, is Lake Merced. The existing and potential beneficial uses of Lake Merced include:

    a. Municipal water supply

b. Water contact Recreation
c. Non-contact water recreation
d. Warm freshwater habitat
e. Cold freshwater habitat
g. Wildlife habitat
h. Fish Spawning

12. The Dischargers have caused or permitted, and threaten to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and create or threaten to create a condition of pollution or nuisance.

13. This action is an Order to enforce the laws and regulations administered by the Regional Board. This action is categorically exempt from the provisions of the CEQA as 'Enforcement Actions by Regulatory Agencies', pursuant to Section 15321 of Title 14 of the California Code of Regulations.

14. The Regional Board has notified the Dischargers, responsible parties and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

15. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the Dischargers shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. Remediation Activities: The Discharger shall conduct site investigation,

monitoring, and remediation activities as needed to define the current local hydrogeologic conditions, to define the lateral and vertical extent of soil and groundwater pollution, and remediate soil and groundwater pollution. Should monitoring results show evidence of pollutant migration, additional characterization and remediation may be required.

2. Nuisance Clause: The storage, handling, treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

3. Clean-up Levels - Soils: The clean-up goal for the source-area soils are as follows. For total petroleum hydrocarbons (TPH) as diesel or gasoline the clean-up level shall be no greater than 10 ppm, for total oil and grease the clean-up level shall be no greater than 100 ppm, and non-detect (ND) for related BTEX constituents. All samples shall be analyzed using applicable EPA analytical methods using appropriate detection limits or methods shown through State or peer review approval to be equivalent to EPA methods.

   Alternate soil cleanup levels may be proposed based on site specific data. If higher levels of pollutants to be left in soils are proposed, the Discharger must demonstrate that the alternative levels will not threaten the quality of the waters of the State, and that human health and the environment are protected. Final cleanup goals for the source-area affected soils must be acceptable to the Executive Officer. If any chemicals are left in the soil, follow up groundwater monitoring may be required.

4. Clean-up Goals - Groundwater: Final cleanup levels and goals for the polluted groundwater, including sources of drinking water, on-site and off-site, shall be background water quality as feasible, in accordance with the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California", and other applicable standards and shall be based on an evaluation of the cost effectiveness and a risk assessment to determine affect on human health and the environment, shall be approved by the Regional Board. These levels shall have a goal of reducing the mobility, toxicity, and volume of pollutants.

5. Reclamation: If the groundwater extraction and treatment is considered as an alternative, the feasibility of water reuse, re-injection, and disposal to the sanitary sewer must be evaluated. Based on the Regional Board Resolution 88-160, the Dischargers shall optimize, with a goal of 100%, the reclamation or reuse of groundwater extracted as a result of cleanup activities. The Dischargers shall not be found in violation of this Order if documented factors beyond the Dischargers' control prevent the Dischargers from attaining this goal, provided the dischargers have made a good faith effort to attain this goal. If reuse or re-injection is part of a proposed alternative, an application for Waste

Discharge Requirements may be required. If discharge to waters of the State is part of a proposed alternative, an application for an NPDES permit must be completed and submitted, and must include the evaluation of the feasibility of the water reuse, re-injection, and disposal to the sanitary sewer.

C. PROVISIONS

1. The Dischargers shall comply with the Prohibitions and Specifications above, in accordance with the following schedule and tasks. In performing the tasks, should the Discharger experience difficulty with obtaining access to other properties, the Regional Board as provided for under State Board Resolution 92-49, shall require uncooperative landowners and tenants of property affected by the discharge to cooperate or, if necessary, to participate in investigation, cleanup, and abatement.

a. TASK: SUBMIT A GROUNDWATER MONITORING PLAN

DUE DATE: SEPTEMBER 30, 1993

Submit a groundwater monitoring plan, acceptable to the Executive Officer, that addresses monitoring of the groundwater wells representative of the conditions found in the shallow aquifer zone. The plan shall include monitoring of the groundwater areas where TPH-g and BTEX constituents that originated from the underground storage tanks located at the site. Additionally, groundwater samples shall be analyzed for Volatile Organic Compounds. The monitoring plan may be modified based upon the results obtained from the current investigation and subsequent investigations with concurrence from Regional Board staff.

b. TASK: IMPLEMENTATION OF THE GROUNDWATER MONITORING PLAN

DUE DATE: Within thirty days after the written approval of the groundwater monitoring plan.

c. TASK: SUBMIT A WORKPLAN TO FULLY CHARACTERIZE THE CONTAMINATED SOIL AND GROUNDWATER ON AND OFF-SITE

DATE DUE: OCTOBER 29, 1993

Description : The dischargers shall submit a technical report acceptable to the Executive Officer outlining the tasks necessary to characterize the vertical and horizontal extent of the contaminated soil. Additionally, the

Discharger must complete the full characterization of the contaminated groundwater plume on and off-site. A description and schedule of the interim measures to remove the free phase product must also be included within this workplan.

Furthermore, in addition to contaminant characterization, the hydrogeologic conditions must be determined in order to evaluate and design the remediation system to abate the contamination emanating from the Site.

d. TASK: SUBMIT THE RESULTS OF THE SOIL AND GROUNDWATER CHARACTERIZATION AS OUTLINED IN TASK c.

DUE DATE: Within sixty days after written approval by the Executive Officer of the workplan for site characterization as outlined in Task c.

e. TASK: SUBMIT A SITE REMEDIATION PLAN WHICH ADDRESSES BOTH SOIL CONTAMINATION AND GROUNDWATER CONTAMINATION ON AND OFF SITE.

DUE DATE: February 28, 1994

Description: Submit a Site Remediation Plan, acceptable to the Executive Officer, that fully describes remedial actions to be taken to control, abate and/or remove pollution found in the soils on site and the groundwater contamination detected in the shallow aquifer. The plan shall include: a discussion of all existing data, a review of the effectiveness of the interim remedial measures from previous investigations, preliminary plans for interim groundwater remedial actions as deemed necessary, preliminary plans of proposed extraction and treatment systems, and a comprehensive schedule for such remedial action(s).

f. TASK: IMPLEMENTATION OF THE REMEDIAL ACTIONS FOR ON-SITE SOILS AND GROUNDWATER IN THE SHALLOW AQUIFER ZONE

DUE DATE: Within sixty days after the Executive Officer's written approval of the remedial action plan pursuant to Section C.1.d above.

g. TASK: SUBMIT A REPORT ON THE EFFECTIVENESS OF THE FINAL REMEDIAL ACTION FOR BOTH SOILS AND GROUNDWATER

DUE DATE: September 30, 1994

Submit a technical report, acceptable to the Executive Officer, which evaluates the effectiveness of the remedial actions for the soil and groundwater emanating from the Site. This report should include implementation and/or modifications or additional measures necessary to fully remediate or contain the groundwater.

2. The Dischargers shall submit to the Regional Board acceptable reports on the compliance with the requirements of this Order, and acceptable activity reports that contain descriptions and results of the work performed. These reports are to be submitted according to a program prescribed by the Regional Board and as outlined below.

   a. **ON A QUARTERLY BASIS,** the Discharger shall submit status reports, which may be prepared in a business letter format, documenting compliance with this Order commencing October 15, 1993. Thereafter, reports shall be due quarterly on the 15th of the month. Each, quarterly report shall cover the previous calendar quarter and include at the following information:

      i. Summary of the work completed since submittal of the previous report, and work projected to be completed before the submittal of the next report.

      ii. Identification of the obstacles which may threaten compliance with the schedule set forth by this Order, and what actions are being taken to overcome these obstacles.

   b. **ADDITIONALLY ON A QUARTERLY BASIS,** technical reports documenting quarterly groundwater monitoring shall be submitted by the Dischargers to the Regional Board commencing **October 15, 1993**, and covering the previous calendar quarter. Each quarterly monitoring report shall include, but not limited to, the following information:

      i. Cumulative tabulated results of free product measurements and water quality sampling analyses for all monitoring wells both on and off-site. This data shall be accompanied by contamination isoconcentration plume maps for each chemical constituent of concern for both first and second water bearing formations based upon the results of the recent sampling event.

      ii. A cumulative tabulation of all well construction details and quarterly water level measurements.

      iii. Quarterly updated water table and piezometric surface maps, based upon the most recent water level measurements for all

affected water bearing zones for all on-site and off-site wells.

iv. A cumulative tabulation of volume of extracted groundwater, quarterly chemical analyses results for all extraction wells, and pounds of pollutants removed during the quarter and total pounds of pollutants removed to date.

v. Reference diagrams and maps including any updated geologic cross sections describing the hydrogeologic conditions of the site, and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying facilities and structures.

3. The dischargers may, by written request, seek modifications or revisions of this Order or any program or plan submitted pursuant to this Order at any time. This Order and any applicable program, plan, or schedule may be modified, terminated, or revised by the Regional Board.

4. If the Dischargers are delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Dischargers shall promptly notify the Executive Officer. If, for any reason, the Dischargers are unable to perform any activity or submit any document within the time required under this Order, the Dischargers may make a written request for a specified extension of time. The extension request shall include justification for the delay, and shall be submitted to the Regional Board in advance of the date on which the activity is to be performed or the document is due. The Regional Board staff may propose an amendment to the Order and bring the matter to the Board for consideration or may recommend an enforcement action.

5. Nothing in this Order is intended or shall be construed to limit or preclude any right the dischargers have to seek administrative and/or judicial review of any orders and determinations of the Board and/or its staff.

6. All hydrogeological plans, specifications, technical reports and documents shall be signed by or stamped with the seal of State registered geologist, registered civil engineer, or certified engineering geologist.

7. All samples shall be analyzed by a State certified laboratory or laboratory accepted by the Regional Board using approved EPA methods for the type of analysis to be performed. All laboratories or the consultant shall maintain quality assurance/quality control records for Regional Board review for a period of six years. Qualitative sampling for screening purposes may be used provided there is appropriate confirmatory sampling by the methods mentioned above.

8. The Dischargers shall maintain in good working order, and operate in the normal

standard of care, any facility or control system installed to achieve compliance with the requirements of this Order.

9. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order shall be provided to the following agencies:

   a. San Francisco Bay Regional Water Quality Control Board
   b. San Francisco Public Health Department -Local Oversight Program

10. The Dischargers shall permit, within the scope of each of their authorities, the Regional Board or its authorized representative, in accordance with Section 13267 (c) of the California Water Code:

    a. Entry upon dischargers' premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

    b. Access to copy any records required to be kept under the terms or conditions of this Order.

    c. Inspection of any monitoring equipment or methodology implemented in response to this Order.

    d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Discharger.

11. The Dischargers shall file a report in a timely manner on any changes in site occupancy and ownership associated with this facility/property described in this Order.

12. If any hazardous substance is discharged in or on any waters of the State, or discharged and deposited where it is, or probably will be discharged in or on any waters of the State, the Dischargers shall report such a discharge to this Board, at (510) 286-1255 on weekdays during office hours from 8:00 a.m. to 5:00 p.m., and the Office of Emergency Services at (800) 852-7550 during non-office hours. A written report shall be filed with the Board within five (5) working days and shall contain information relative to: the nature of the waste or pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control and Countermeasure Plan in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and persons notified.

13. Any provisions of this Order substantially identical to provisions which the

State Water Board or a court of law determines to be in excess of the Board's legal authority shall have no force or effect in this Order.

14. This Order is intended to be the primary regulating document by which site cleanup shall proceed for the Discharger and property named herein, with the San Francisco Public Health Department, Local Oversight Program as lead agency, and Chevron U.S.A. Inc. as the primary contact representing the named Discharger.

15. If the Executive Officer finds that the Discharger(s) have failed to comply with the Provisions of this Order, he is authorized to issue a complaint for Board consideration of Administrative Civil Liabilities, or after approval of the Board Chairperson, to request the Attorney General to take appropriate action against the Discharger(s), including injunction and civil remedies, if appropriate.

16. Pursuant to Section 13304 of the California Water Code, the Discharger(s) is (are) hereby notified that the Regional Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Regional Board to investigate unauthorized discharge of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial actions. Upon receipt of a billing statement for such costs, the Discharger(s) shall reimburse the Regional Board.

17. The Regional Board will review this Order periodically and may revise the requirements when necessary.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 21, 1993.

Steven R. Ritchie
Executive Officer

FIGURES

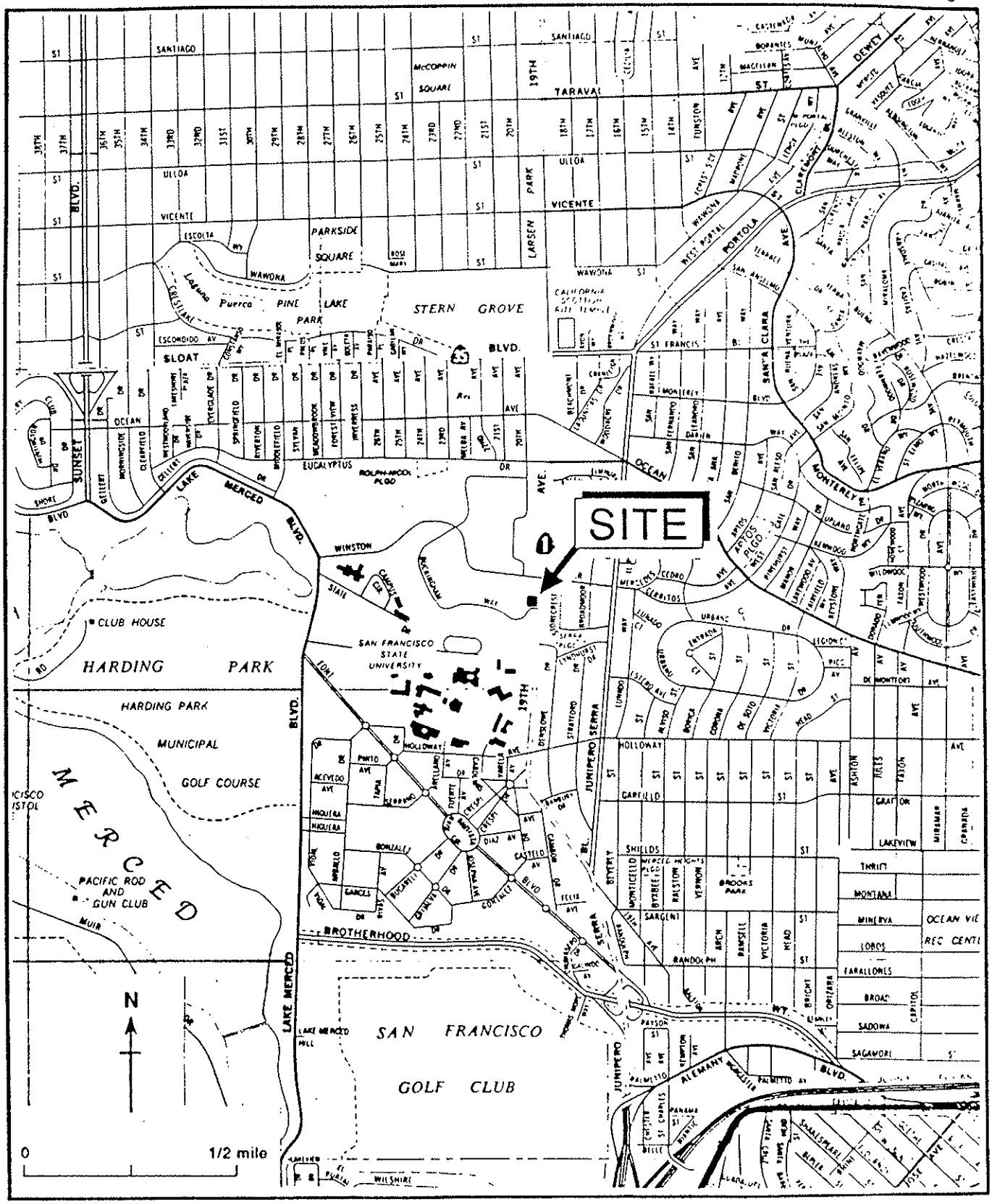


Figure 1. Site Location Map - Chevron Service Station #96235, 3451 19th Avenue, San Francisco, California

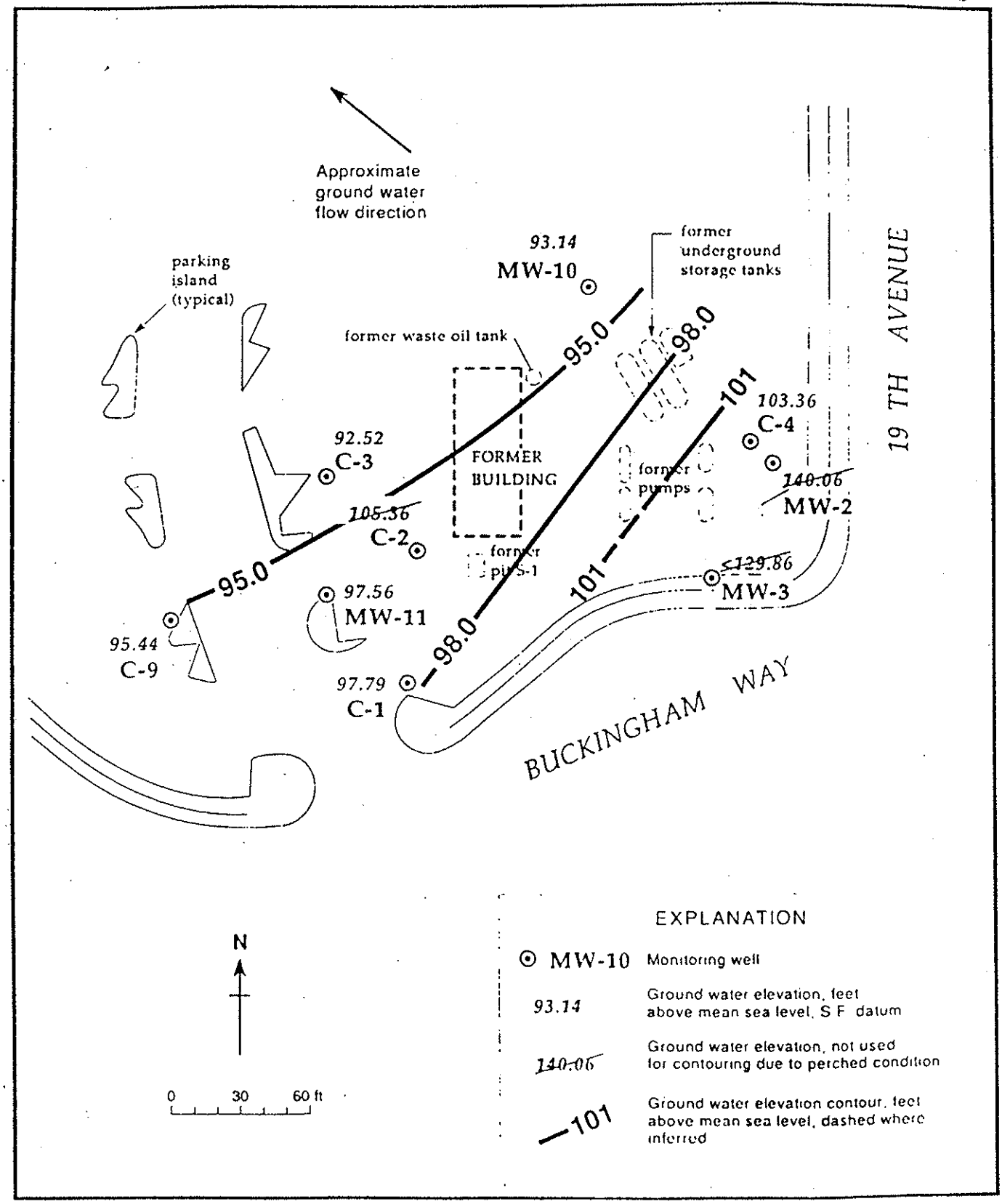
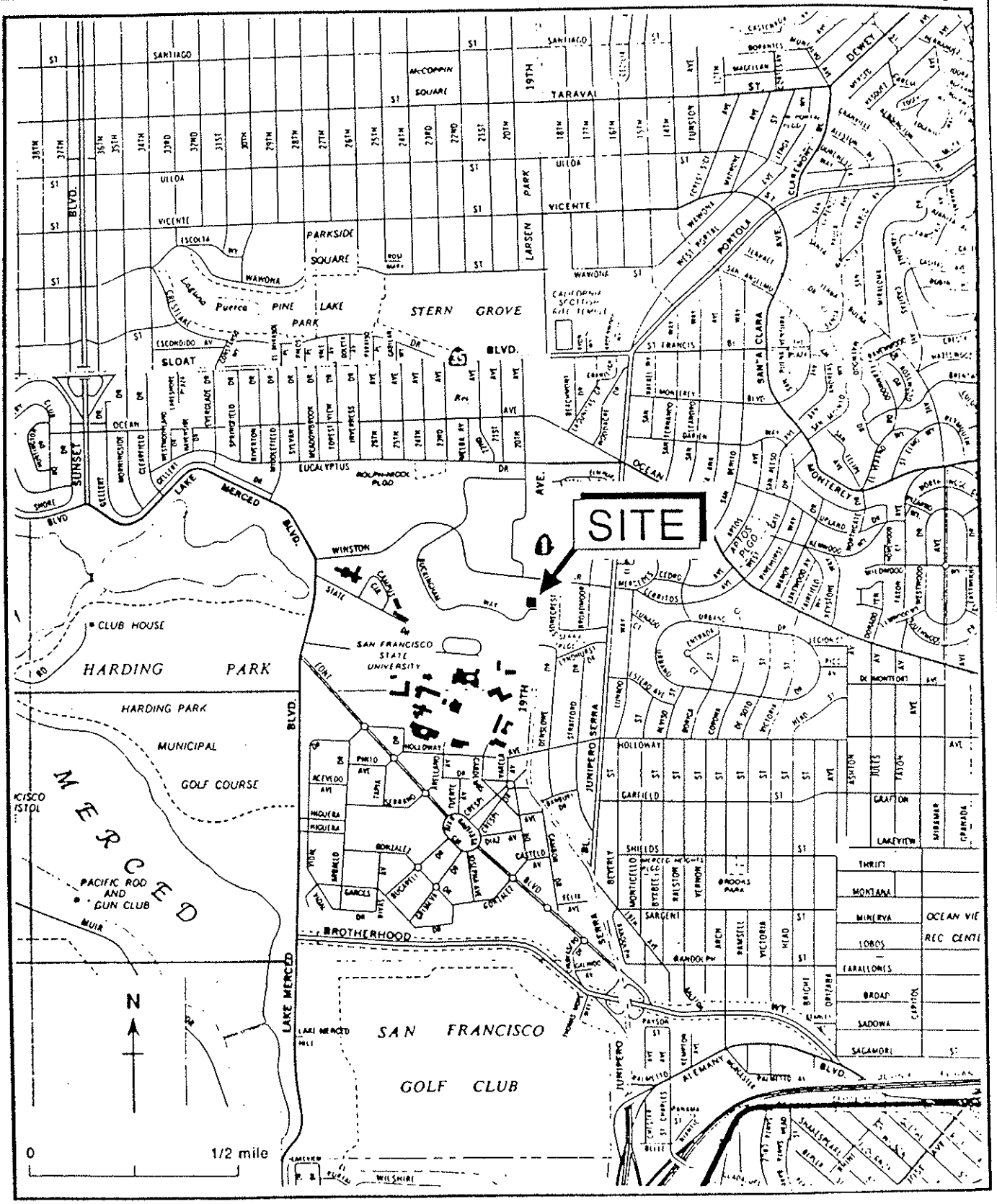


Figure 2. Underground Storage Tank Site - 3451 19th Avenue, San Francisco, CA

APPENDIX D



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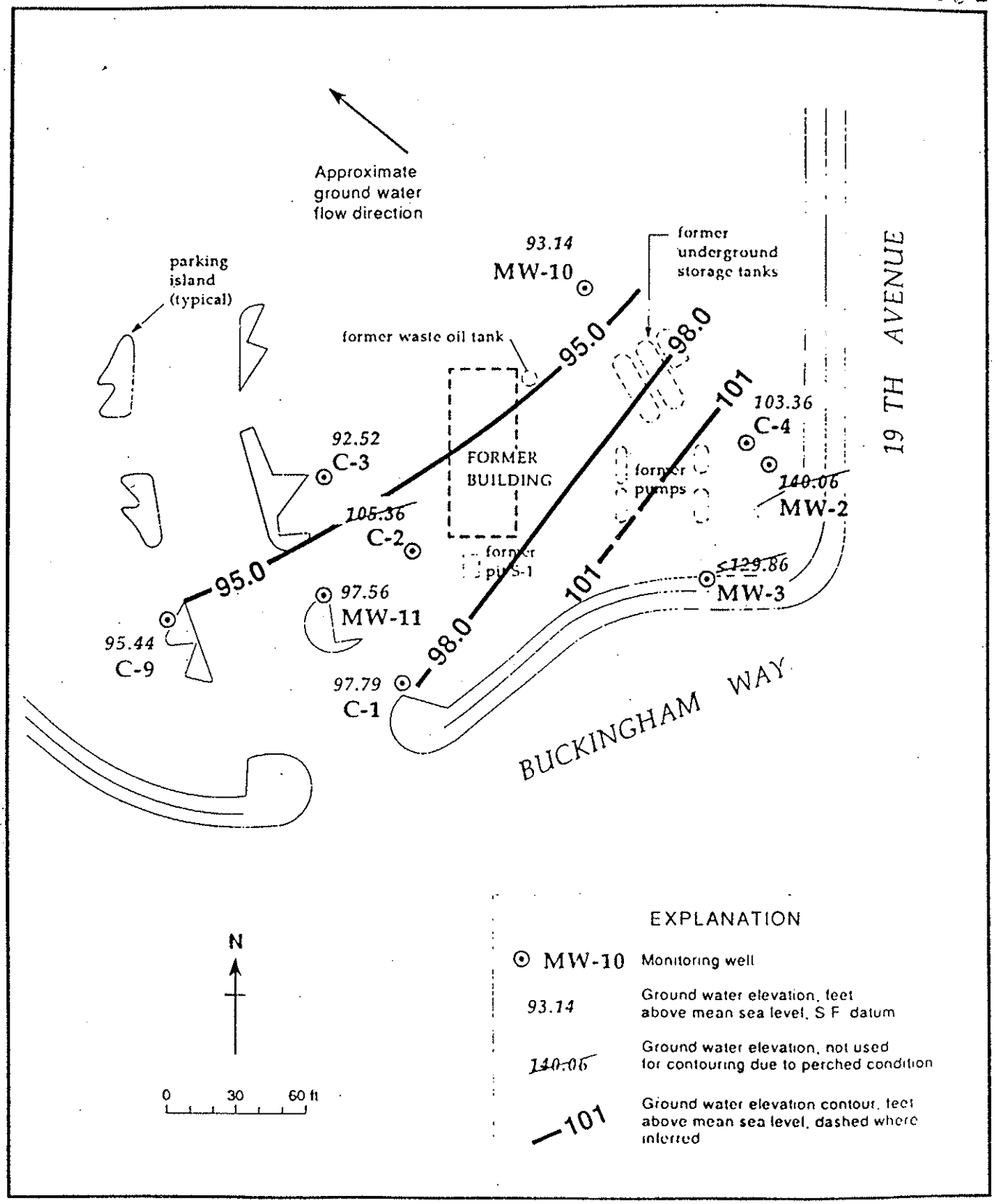

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