

**STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

ORDER NO. R4-2004-0055

**WASTE DISCHARGE REQUIREMENTS
FOR
NON-HAZARDOUS PETROLEUM HYDROCARBON
CONTAMINATED SOILS TREATMENT**

**AMERICAN REMEDIAL TECHNOLOGIES, INC.
(FILE NO. 95-029)**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), finds:

1. American Remedial Technologies, Inc. (ART) has treated non-hazardous petroleum hydrocarbon contaminated soils (PHCSs) through thermal desorption at the Earle M. Jorgensen Steel facility located at 2680 Seminole Avenue, in the City of Lynwood since 1995 under waste discharge requirements (WDRs) of Regional Board Order No. 95-131. On October 8, 2003 ART submitted a Report of Waste Discharge for relocating the facility for the storage and treatment of PHCSs to 2680 Imperial Highway, in the City of Lynwood, CA (see Figure 1, attached). The WDRs contained in this Order are being adopted to regulate ART's operation at its new facility.
2. Soils containing petroleum hydrocarbons, where identified and left unmitigated, constitute an ongoing discharge of waste(s) to land that could affect the quality of waters of the state within the meaning of § 13260 of the California Water Code (CWC).
3. On August 19, 2003, the City of Lynwood, as lead agency under CEQA, adopted a Negative Declaration addressing ART's relocation project.
4. On September 9, 2003, the City of Lynwood approved Conditional Use Permit #203-22 for ART's operation at the relocation premises.
5. On July 23, 2003 ART submitted the plan "*Cessation and Relocation of Soil Treatment Processing*" to decommission the facility at 2680 Seminole Avenue, in the City of Lynwood. Regional Board staff reviewed the plan and approved of proposed measures to decommission the facility in a letter dated January 15, 2004.
6. ART's soil treatment operations are located within five existing buildings, including a small receiving office, a 29,700 ft² untreated soil storage building, a 19,000 ft² untreated soil storage building, a 29,700 ft² building for treated soil, and a 11,370 ft² administrative office building (see Figure 2, attached). The untreated soil storage buildings will be lined with containment systems consistent with a Class II wastepile.

7. ART uses thermal desorption technology to treat incoming PHCSs to levels that are protective of surface and ground waters. The thermal desorption process involves heating the PHCSs to temperatures necessary to remove the adsorbed petroleum hydrocarbons, thus reducing their concentrations to acceptable regulatory levels. Requirements are included in this Order to allow amending of processed soils in order to enhance the reuse properties of the treated soils.
8. The thermal desorption unit operates at a maximum capacity of 50 tons or 35 cubic yards (cy) per hour, and consists of four main components:
 - Feed system and rotary kiln;
 - Thermal oxidizer, air-to-air cooler, and baghouse;
 - Control house with safety, temperature, and data collection devices; and
 - Soil discharge system.
9. Dust collected by the baghouse is routinely blended with treated soil for recycling/disposal.
10. ART's thermal desorption operation is also regulated by the South Coast Air Quality Management District (SCAQMD). ART currently operates under two SCAQMD permits that regulate construction and operation of the thermal desorption unit and soil handling. These permits place restrictions on plant operations.
11. All contaminated soils accepted at ART's facility are maintained indoors.
12. ART's facility overlies groundwater in the Central Basin of the Los Angeles Coastal Plain Groundwater Basin, in the Los Angeles Coastal Plain Hydrologic Area.
13. Pursuant to section 402 (p) of the Clean Water Act (33 USC 1342 (p)) and 40 Code of Federal Regulations parts 122, 123, and 124, the State Water Resources Control Board (State Board) adopted a National Pollutant Discharge Elimination System (NPDES) General Permit to regulate storm water discharges associated with industrial activities in California (State Board Order 97-03-DWQ).
14. The Regional Board adopted a revised Water Quality Control Plan for the Los Angeles Region (Basin Plan) on June 13, 1994. The Basin Plan contains beneficial uses and water quality objectives for both surface and ground waters in the Central Basin of the Los Angeles Coastal Plain Groundwater Basin. The requirements of this Order, as they are met, are in conformance with the goals of the Basin Plan.
15. The beneficial uses of groundwater in the Central Basin of the Los Angeles Coastal Plain

Groundwater Basin are for municipal supply, agricultural supply, industrial process supply, and industrial service supply.

The Regional Board has notified interested agencies and all known interested parties of its intent to adopt WDRs for this discharge, and has provided them with an opportunity to submit their written views and recommendations.

The Regional Board in a public meeting heard and considered all comments pertaining to these WDRs.

IT IS HEREBY ORDERED that ART shall comply with the following:

A. PROHIBITIONS

1. No hazardous wastes, (as defined in California Code of Regulations, title 22 [22 CCR] § 66261.3 et seq.) shall be processed at ART's facility. Only non-hazardous PHCSs shall be accepted, stored, or treated at ART's facility.
2. No PHCSs accepted for treatment shall contain waste oil, as defined in title 22 CCR, division 4, article 4, § 66261.126, appendix X (b).
3. No PHCSs accepted for treatment shall contain free liquid, as determined by the paint filter test (USEPA Method 9095, SW-846).
4. No mixing of soils to achieve acceptable disposal limits is allowed.
5. Discharges of waste to land as a result of inadequate thermal desorption practices which have not been specifically described to the Regional Board and for which valid WDRs are not in force are prohibited.
6. Odors, vectors, and other nuisances of waste origin caused by ART's operation are prohibited.
7. The discharge of waste to surface drainage courses or to usable groundwater is prohibited.
8. Basin Plan prohibitions shall not be violated.
9. All federal, state, and county sanitary health codes, rules, regulations, and ordinances shall be complied with in the operation and maintenance of ART's facility.
10. No radioactive waste, including low level radioactive waste, as defined by the agency with jurisdictional authority, shall be accepted for treatment at ART's

facility.

11. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited and will constitute a violation of this Order.
12. Thermally treated soils that meet the criteria for reuse off-site shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life pursuant to 22 CCR § 66261.24.
13. No condition of pollution or nuisance, as defined by § 13050 of the CWC, shall be caused by the handling, storage, treatment, and reuse of the wastes, or from any operation conducted in association with treatment operations subject to this Order.
14. The discharge of wastes or waste constituents to groundwater, surface waters, or surface water drainage courses is prohibited.
15. PHCSs shall not be accepted at the facility during rainfall which causes runoff.

B. PROVISIONS FOR ACCEPTABLE MATERIALS

1. PHCSs accepted for treatment at ART's facility may include crude oil and refined products, such as leaded and unleaded gasoline, fuel oils, diesel fuel, kerosene, jet fuel, hydraulic and lubricating oils, and other petroleum based hydrocarbon products with a boiling point of less than 1,000 °F.
2. PHCSs containing polynuclear aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs) may be accepted at ART's facility if they are managed and treated in accordance with facility-specific SCAQMD permits. Non-PHCSs that are contaminated with PAHs may be accepted at ART's facility on a project specific basis and based on prior approval by the Regional Board Executive Officer (Executive Officer) of appropriate characterization, testing, processing, and disposal/reuse methods.

3. Upper end levels of hydrocarbon contamination acceptable for treatment are as follows:

Gasoline, jet fuel, or similar	5,000 mg/Kg	0.50% by weight
Kerosene, diesel, or similar	20,000 mg/Kg	2.00% by weight
Lubricants, or similar	30,000 mg/Kg	3.00% by weight
Crude oils, or similar	50,000 mg/Kg	5.00% by weight

4. At any time, ART may file a written request, including appropriate supporting documents, with the Executive Officer, proposing acceptance of soils whose dominant contaminants, similar to PHCSs, can be efficiently remediated through

thermal desorption and are consistent with all requirements of this Order. ART shall implement any changes to the M&RP No. CI-7597 approved by the Executive Officer upon receipt of a signed copy of the revised M&RP.

C. PROVISIONS FOR WASTE EVALUATION PROCEDURES

1. A waste evaluation program shall be continuously implemented to assure that only soils acceptable for thermal desorption treatment are accepted.
2. ART shall require soil profile results from all generators that provide contaminant and material characteristics specific to an individual source before accepting delivery to ART's facility. The soil profile information shall include a certification from the generator that the contaminated soils are non-hazardous in nature.
3. ART shall confirm a minimum number of generator-conducted soil profile tests from an individual source before accepting delivery to ART's facility at the following frequency:

<u>Volume (cy)</u>	<u>Testing Frequency</u>
Less than 600	3 samples
600 to 2,000	One sample per 200 cy
2001 to 10,000	One sample per 500 cy
Greater than 10,000	One sample per 1,000 cy

4. ART shall implement a continuous and routine sampling and testing program to independently evaluate analytical information presented by generators. Sampling shall be random in nature and testing must be at a frequency of a minimum of 5% of the total generator tests evaluated pursuant to provision No. C.3, above. This random testing of incoming soils will not preclude a waste-load checking program as detailed below.
5. Any surface runoff water from the untreated soil storage area is to be collected and may be reused on untreated soils stockpiled on approved soil receiving areas at the facility. Any other reuse is subject to WDRs.
6. ART shall continue to implement a waste-load checking program to ensure that only PHCSs meeting the requirements of this Order are accepted at ART's facility. The waste-load checking program shall consist of the following:
 - A. Every truck arriving at the facility must be accompanied by an appropriate manifest or bill of lading containing correct generator information.
 - B. ART shall visually screen all incoming contaminated soils for the presence of free liquids and to evaluate any discrepancies with corresponding

generator characterization information.

- C. ART shall screen all incoming contaminated soils for VOCs with an organic vapor analyzer using flame ionization or photo ionization. Screening and handling methods shall be consistent with SCAQMD permit requirements.
- D. If organic halogens are suspected, ART shall conduct a copper wire test for gross halogen contamination. If a positive result is indicated, ART shall conduct further analysis or review to confirm that the organic halogens are not at hazardous levels before the contaminated soils are accepted for treatment.

D. PROVISIONS FOR SOIL PROCESSING PROCEDURES

- 1. The storage area for incoming PHCSs shall be constructed, maintained, and operated in compliance with the Classification and Siting Criteria consistent with a Class II wastepile for designated waste, specified in title 27 CCR, including a leak detection system. This is necessary because incoming PHCSs could be a designated waste as defined in 27 CCR § 20210. The liner requirements of a Class II wastepile could be satisfied by a showing to the satisfaction of the Executive Officer that treated reinforced concrete slabs within the enclosed buildings would be the functional equivalent of a liner.
- 2. Contaminated and treated soils shall be confined to areas specifically designed and constructed for their containment and storage and shall be consistent with SCAQMD permit requirements.
- 3. The facility shall be enrolled under general Order 97-03-DWQ. ART shall develop a Storm Water Pollution Prevention Plan (SWPPP) for the facility as required by this general Order. Discharge of materials other than stormwater and non-stormwater discharges authorized through enrollment in this general Order, either directly or indirectly, to waters of the State are prohibited.

E. PROVISIONS FOR TREATMENT LIMITS

- 1. Limits for treated soils can vary dependant on the disposal/reuse options described below. These treatment limits are for thermally treated soils only and no mixing or diluting of soils is allowed to achieve acceptable disposal/reuse results.
 - a. In order for thermally treated soils to be reused for construction backfill, ART shall certify that they meet the following limits:

<u>Parameter</u>	<u>Limit</u>	<u>Units</u>
TRPH	500	mg/Kg

TPH as diesel	10	mg/Kg
TPH as gasoline	10	mg/Kg

Moreover, for any constituent required to be monitored by this Order for which a maximum contaminant level (MCL) has been established by the United States Environmental Protection Agency (USEPA) or the State of California Department of Health Services, the total concentration of that contaminant in soil shall be no greater than the MCL for that constituent in drinking water as determined by appropriate USEPA testing methods and using USEPA Toxic Constituent Leaching Procedure (TCLP) or California Waste Extraction Test (WET) extraction procedures with a leaching agent appropriate for the contaminants at frequencies specified in the attached Monitoring and Reporting Program (M&RP) No. CI-7597 (incorporated herein by reference).

- b. In order for thermally treated soils to be reused for road base, ART shall certify that the treated soils meet cleanup limits established by the Regional Board (Interim Site Assessment and Cleanup Guidebook, May 1996) for petroleum impacted sites. Summary Table 4.1 from the Guidebook is incorporated by reference as Attachment 1. Minimum cleanup limits shall assume that the distance above groundwater at the disposal facility is less than 20 feet and that the facility is underlain by gravel. Minimum cleanup limits for PHCSs are as follows:

<u>Parameter</u>	<u>Limit</u>	<u>Units</u>
TRPH	1,000	mg/Kg
TPH as diesel	100	mg/Kg
TPH as gasoline	100	mg/Kg

Similarly, for any constituent required to be monitored by this Order for which an MCL has been established, the total concentration of that contaminant in soil shall be no greater than the MCL for that constituent in drinking water as determined by appropriate USEPA methods and using TCLP or WET extraction procedures with a leaching agent appropriate for the contaminants.

- c. A third option for thermally treated soils is disposal at an inert landfill or Class III landfill permitted by the Regional Board. For disposal at an inert landfill the treated soils shall meet the same limits as for reuse for road base as described in Provision No. E.1.b, above. For disposal at a Class III landfill the treated soils shall meet the same limits for petroleum hydrocarbons as described in Provision No. E.1.b and be at non-hazardous levels for any other contaminants.

2. PHCSs that cannot be successfully thermally treated to the above-specified limits must be removed to a legal point of disposal. For the purpose of these requirements, a legal point of disposal is defined as one for which WDRs have been established by a California Regional Water Quality Control Board and that is in full compliance therewith.
3. ART shall certify that any processed materials that are amended pursuant to this Order meet the reuse requirements of applicable Provisions Nos. E.1.a or E.1.b, above. Moreover, ART shall implement a routine sampling and testing program to generate analytical information for the amended soils to confirm that they do not pose greater risk to health or water quality than soils that have not been amended. Sampling shall be random in nature and testing must be at a frequency of a minimum of 5% of the total of amended soils and treated for those monitoring parameters included in this Order or any other parameters deemed appropriate by the Regional Board Executive Officer.
4. Soil analyses shall be conducted after treatment, as specified in the attached M&RP No. CI-7597, to ensure the treatment process has been effective, and that the soil reuse will have no adverse effect on the beneficial uses of surface waters or groundwater.

F. GENERAL PROVISIONS

1. Vadose zone monitoring shall be in place and functioning prior to starting storage and treatment operations. In the event that organic vapors are detected during vadose zone monitoring, ART must notify this Regional Board by telephone, within 24 hours, followed by written notification within one week, as to the location of the detected vapors, and the action to be taken to correct the vapor leak(s).
2. Within 30 days of the adoption of this Order, ART shall submit a sign for approval by the Executive Officer that directs interested parties with complaints regarding environmental practices at ART's Facility to contact telephone numbers at the Regional Board as well as the South Coast Air Quality Management District. Following approval, the sign shall be posted at all points of access to ART's Facility.
3. ART shall maintain a copy of this Order at ART's facility so as to be available at all times to personnel operating ART's facility.
4. ART shall file a report with the Regional Board of any material change, or proposed change in the character, location or volume of the discharge or treatment process, 120 days prior to the proposed change, in accordance with § 13260 of the CWC.
5. In the event of any change of name of ART, control, or ownership of land, or

treatment facilities, ART shall:

- A. Notify the Regional Board in writing of such a change;
 - B. Notify the succeeding owner or operator by letter, a copy of which shall be filed with the Regional Board, of the existence of this Order.
6. Ninety days prior to cessation of storage and treatment at ART's facility, ART shall submit a technical report to the Regional Board describing the methods and controls to be used to ensure protection of water quality during final operations, and with any proposed subsequent use of ART's facility. Such methods and controls shall comply with this Order. All work must be performed by or under the direction of a California registered civil engineer, registered geologist, or certified engineering geologist, as provided in sections 6762, 7850, and 7842, respectively, of the California Business and Professional Code. A statement is required in all technical submittals that the registered professional in direct responsible charge actually supervised or personally conducted all the work associated with the project.
 7. ART shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. ART shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
 8. If ART becomes aware that it failed to submit any relevant facts in any report to the Regional Board, it shall submit such facts or information within seven days of its discovery of the omission.
 9. ART has a continuing responsibility for correcting any problems which may arise as a result of this waste discharge, or as a result of water applied to ART's facility during subsequent use of the land for purposes other than those specified herein.
 10. This Order is not transferable to any person except after notice to the Executive Officer. The Regional Board may require modification or revocation and re-issuance of this Order to change the name of ART and incorporate such other requirements as may be necessary under the CWC. ART shall submit notice of any proposed transfer of this Order's responsibility and coverage as described under Provision No. F.3 of this Order.
 11. In accordance with CWC § 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into the waters of the state are privileges, not rights.
 12. This Order does not convey any property rights of any sort, or any exclusive privilege.

13. In accordance with § 13267 of the CWC, ART shall furnish, under penalty of perjury, technical monitoring program reports. Such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which are subject to periodic revision, as warranted.
14. According to § 13263 of the CWC, these WDRs are subject to periodic review and revision by the Regional Board.
15. These WDRs may be revised at a later date, as necessary, to include groundwater monitoring, or for any other reason as determined by the Regional Board.
16. ART must notify the Regional Board by telephone, within 24 hours, followed by written notification within one week, in the event ART is unable to comply with any of the conditions of this Order because of events such as:
 - A. Breakdown of soil treatment equipment;
 - B. Accidents caused by human error or negligence; and
 - C. Natural disasters.
17. The Regional Board and other authorized representatives shall be allowed:
 - A. Entry upon premises where the fixed facility is operating, or where records are kept under the conditions of this Order;
 - B. Permission to copy any records that are kept under the conditions of this Order;
 - C. To photograph, sample, and monitor for the purpose of ensuring compliance with this Order, or as otherwise authorized by the CWC.
18. This Order includes the attached “*Standard Provisions Applicable to Waste Discharge Requirements*”, adopted November 7, 1990 (Attachment 2) which are incorporated herein by reference. If there is any conflict between provisions stated herein and the standard provisions, the provisions stated herein will prevail.
19. The requirements of the attached M&RP No. CI-7597 are hereby made part of this Order. If there is any conflict between provisions of M&RP No. CI-7597 and the standard provisions, the provisions stated in M&RP No. CI-7597 will prevail.
20. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the

application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

21. This Order becomes effective on the date of adoption by the Regional Board.
22. This Order may be terminated or modified for cause including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - c. A change in any condition that required either a temporary or permanent reduction or elimination of the authorized waste discharge.
23. Except for enforcement purposes, Regional Board Order No. 95-131 adopted September 18, 1995 is rescinded on April 15, 2004.
24. The plan "*Cessation and Relocation of Soil Treatment Processing*" referenced in Finding No. 5 of this Order remains in effect until completed pursuant to approval by the Executive Officer.

This Order in no way limits the authority of the Regional Board, as contained in the CWC, to require additional investigations and cleanups pertinent to this project. This Order may be revised by the Executive Officer as additional information from the project becomes available.

Failure to comply with the terms and conditions of this Order may result in imposition of civil liability against ART by the Regional Board, either by the Regional Board or judicially by the Superior Court, in accordance with CWC § 13350 et seq. and/or referral to the Attorney General of the State of California for such legal action as may be deemed appropriate.

I, Dennis A. Dickerson, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region on April 1, 2004.

April 6, 2004

Dennis A. Dickerson
Executive Officer

FIGURE 1:
AMERICAN REMEDIAL TECHNOLOGIES, INC. - LOCATION MAP

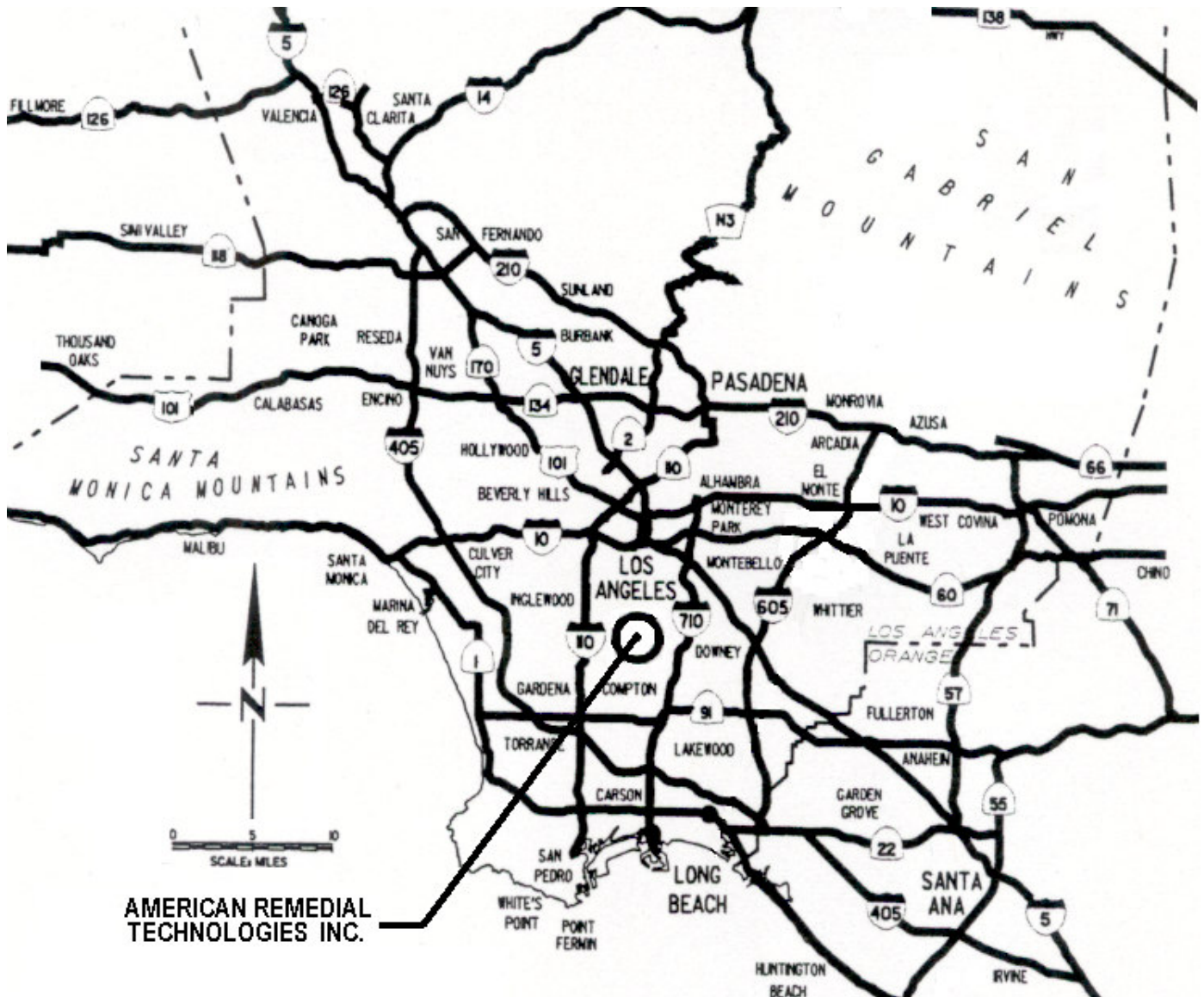


FIGURE 2:
AMERICAN REMEDIAL TECHNOLOGIES, INC. - FACILITY MAP

