PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install complete soils treatment under and adjacent to building to provide uniform toxic barrier in all routes of termite entry.

B. Related Sections:
   1. Section 31 2324: Installation of laminated vapor retarder.

1.2 SUBMITTALS

A. Product Data: Submit Chemical Manufacturer's printed literature regarding chemical composition, concentration, and rates and method of application.

B. Quality Control:
   1. Submit statement indicating total amount of chemical required for Project to provide required amount of mix solution at specified concentration and application rates.
   2. Submit take-off showing amounts of square foot and linear foot application at specified application rate. Also indicate total amount of mix solution required for Project.
   3. Provide one sample of approximately one cup from each batch of mix solution. Label each sample with Project name, date of application, chemical composition, and mix concentration. Draw off each sample in Architect's presence.

1.3 QUALITY ASSURANCE

A. Qualifications: Use of specified chemicals is restricted to certified applicators, or persons under their direct supervision, and only for those uses covered by certified applicator's certification.

B. Regulatory Requirements:
   1. This specification covers more than one chemical and, therefore, is not specific in all aspects of handling and usage.
   2. Requirements for application by certified applicator presumes that Manufacturer's requirements and those of federal, state, and local regulatory agencies shall be met.
   3. Nothing in Contract Documents shall be construed as allowing circumvention of above requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Keep containers closed when not in use. Do not store near food or feed. Protect from freezing. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove residue to chemical waste area.

B. Dispose of empty containers in accordance with Manufacturer's and regulatory agency's requirements.
1.5 WARRANTY

A. Furnish written warranty that includes chemical concentration and application rates showing compliance with Contract Documents, Chemical Manufacturer's recommendations, and applicable governmental regulations. Warranty shall state concentrations and rates of application used.

B. Warranty shall guarantee effectiveness of treatment against subterranean termite infestation for five years minimum from acceptance date of Project and be signed by applicator and Contractor as co-guarantors.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Category Four Approved Products. See Section 01 6000 for definitions of Categories.
   1. Type 1: Termidor by BASF Professional Pest Control, Research Triangle Park, NC www.termidoronline.com
   2. Type 2: Talstar termiticide / insecticide by FMC Corp, Philadelphia, PA www.fmc-apgspec.com

2.2 MIXES

A. Mix chemicals and water at Manufacturer's full labeled rate per 100 gallons of finished emulsion.

PART 3 - EXECUTION

3.1 PREPARATION

A. Do not apply emulsion until location of air ducts, vents, water, and sewer lines are known and identified. Take extreme caution to avoid contamination of these structural elements and airways.

B. Protection:
   1. Allow no disturbance of treated soil between application of solution and placing of concrete.
   2. Protect neighboring property, water sources, and personnel on site from contamination.
      a. Use anti-backflow equipment or procedures.
      b. Do not treat soil beneath structures that contain wells or cisterns.
      c. Take extreme care to avoid runoff. Do not treat soil that is water-saturated or frozen.
   3. Maintain, on job site, empirical name of chemical, Manufacturer's precautions, and phone numbers of proper authorities to notify in case of spillage or other accident.

3.2 APPLICATION

A. Interface With Other Work:
   1. Coordinate work so laminated vapor retarder can be installed as soon as possible after application of termite protection and before any precipitation or soil disturbance. Reapply solution to areas disturbed by subsequent excavation, other construction activities, or heavy rain following application.

B. Apply chemicals as water emulsion at concentrations and rates specified. If impervious soils make reduction in volume of solution necessary, increase percentage of toxicant used in proportion to insure same amount of insecticide be used per linear or square foot meter.

C. Pre-Construction Treatment:
   1. Provide unbroken vertical and horizontal chemical barrier to termite entry.
2. For Slab-on-Grade Construction:
   a. Type 1 Termiticide:
      1) 4 gals per 10 lin ft 15 L per 3 000 lin mm along outside of exterior foundation.
      2) 2 gals per 10 lin ft 7.5 L per 3 000 lin mm in voids of unit masonry foundation walls or piers.
   b. Type 2 Termiticide:
      1) One gal per 10 sq ft 3.5 L per one sq m as overall treatment under slab and attached porches.
      2) 4 gals per 10 lin ft 15 L per 3 000 lin mm along inside of exterior foundation walls, both sides of interior partition foundation walls, and around utility services and other features that will penetrate slab.

3. For Crawl-Space Construction:
   a. Type 1 Termiticide:
      1) 4 gals per 10 lin ft 15 L per 3 000 lin mm along inside of exterior foundation walls, both sides of interior partition foundation walls, and around utility services and other features that will penetrate floor of crawl space.
      2) 4 gals per 10 lin ft 15 L per 3 000 lin mm along outside of exterior foundation walls.
      3) 2 gals per 10 lin ft 7.5 L per 3 000 lin mm in voids of unit masonry foundation walls and piers.

4. For Basement Construction:
   a. Type 1 Termiticide:
      1) 4 gals per 10 lin ft 15 L per 3 000 lin mm along outside of foundation walls where foundation is of poured concrete or where footings for masonry foundations are 30 inches 750 mm or less below grade level and including that part which will be under platforms or porches. 8 gals per 10 lin ft 30 L per 3 000 lin mm where footings for masonry foundations are more than 30 inches 750 mm below grade level.
      2) 2 gals per 10 lin ft 7.5 L per 3 000 lin mm in voids of unit masonry foundation walls or piers.
   b. Type 2 Termiticide:
      1) One gal per 10 sq ft .5 L per one sq m as overall treatment under basement slab.
      2) 4 gals per 10 lin ft 5 L per 3 000 lin mm to critical areas within basement areas such as along inside of foundation walls, along both sides of partition foundation walls, around piers, and around entrance of any utility service or other feature that will penetrate basement slab.

D. Treatment For Existing Construction:
1. Use sub-slab injection, rodding, or trenching with low-pressure spray.
2. For Slab-on-Grade Construction:
   a. Type 1 Termiticide: 4 gals per 10 lin ft 15 L per 3 000 lin mm along outside of exterior foundation walls and at locations of termite activity in building interior.
3. For Crawl-Space Construction:
   a. Type 1 Termiticide: 4 gals per 10 lin ft 15 L per 3 000 lin mm along inside and outside of exterior foundation walls, both sides of interior partition foundation walls, and around utility services and other features that penetrate floor of crawl space.
4. For Basement Construction:
   a. Type 1 Termiticide:
      1) 4 gals per 10 lin ft 15 L per 3 000 cu m to critical areas within basement areas such as along inside of foundation walls, along both sides of partition foundation walls, around piers, and around entrance of any utility service or other feature that will penetrate basement slab.
      2) 4 gals per 10 lin ft 15 L per 3 000 lin mm along outside of foundation walls where foundation is of poured concrete or where footings for masonry foundations are 30 inches 750 mm or less below grade level including around platforms or porches. 8 gals per 10 lin ft 30 L per 3 000 cu m where footings for masonry foundations are more than 30 inches 750 mm below grade level.
5. Expose or penetrate areas of termite activity within building and treat at rate of one gal per 10 sq ft 3.5 L per one sq meter.

E. Post Construction Treatment
1. Use sub-slab injection, rodding, or trenching with low-pressure spray. Do not make an overall broadcast application of chemical in crawl space or on any soil beneath plenum air space. Do not extend below tops of footings.

2. For Slab-on-Grade Construction:
   a. **Type 1 Termiticide**:
      1) One gal per 10 sq ft 3.5 L per one cu m as overall treatment under slab and attached porches.
      2) 4 gals per 10 lin ft 15 L per 3 000 lin mm along inside and outside of exterior foundation walls, both sides of interior partition foundation walls, and around utility services and other features that penetrate slab.
      3) 2 gals per 10 lin ft 7.5 L per 3 000 lin mm in voids of unit masonry foundation walls or piers.

3. For Crawl-Space Construction:
   a. **Type 1 Termiticide**:
      1) 4 gals per 10 lin ft 15 L per 3 000 lin mm along inside and outside of exterior foundation walls, both sides of interior partition foundation walls, and around utility services and other features that penetrate floor of crawl space.
      2) 2 gals per 10 lin ft 7.5 L per 3 000 lin mm in voids of unit masonry foundation walls and piers.

4. For Basement Construction:
   a. **Type 1 Termiticide**:
      1) One gal per 10 sq ft 3.5 L per one cu m as overall treatment under basement slab.
      2) 4 gals per 10 lin ft 15 L per 3 000 cu m to critical areas within basement areas such as along inside of foundation walls, along both sides of partition foundation walls, around piers, and around entrance of any utility service or other feature that will penetrate basement slab.
      3) 4 gals per 10 lin ft 15 L per 3 000 lin mm along outside of foundation walls where foundation is of poured concrete or where footings for masonry foundations are 30 inches 750 mm or less below grade level including that part which will be under platforms or porches. 8 gals per 10 lin ft 30 L per 3 000 cu m where footings for masonry foundations are more than 30 inches 750 mm below grade level.
      4) 2 gals per 10 lin ft 7.5 L per 3 000 lin mm in voids of unit masonry foundation walls or piers.

3.3 FIELD QUALITY CONTROL

A. **Inspection**:
   1. Notify Architect two working days prior to application of chemicals.
   2. Deliver chemicals to site in Manufacturer's original, unopened containers and mix to specified concentration in Architect's presence.

B. **Site Tests**:
   1. Have applicable governmental agency test application for amount of chemical applied. Submit test results to Architect.
   2. Samples provided under paragraph 1.2,C,3 above will be submitted to laboratory analysis by Architect if requested by Owner in accordance with General Conditions Paragraph 15.4.

3.4 PROTECTION

A. Allow 12 hours for drying after application before resuming construction activities. Post signs in areas of application warning of poison application. Remove signs when areas with application are covered by other construction.

**END OF SECTION**