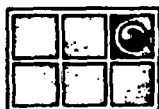


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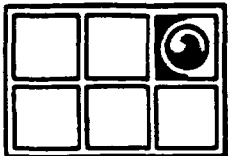
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REMEDIAL ACTION PLAN
EXCAVATION OF LAGOONS 5, 7 and 9
AT MONSEY PRODUCTS
KIMBERTON, PENNSYLVANIA



GROUNDWATER TECHNOLOGY, INC.

AR300108



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ORIGINAL
(Red)

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EXCAVATION OF LAGOONS 5, 7 and 9
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KIMBERTON, PENNSYLVANIA

14 September 1984

Prepared for: CIBA-GEIGY and Monsey Products

Prepared by: Groundwater Technology
Chadds Ford, Pennsylvania

CONSULTING GROUNDWATER GEOLOGISTS WITH OFFICES WORLDWIDE

AR300109

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I. PURPOSE

The purpose of this document is to set forth guidelines under which a remedial action program may be implemented to excavate and remove the materials presently located in lagoons #5, 7, and 9 (Figure 1). The lagoons are located within the current property limits of Monsey Products in Kimberton, Pennsylvania. The guidelines stated herein shall be used throughout the entire remedial action program.

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II. PARTICIPANTS

The remedial action program will consist of site cleaning, excavation, and restoration and waste material hauling and disposal. These activities will be coordinated and overseen by Groundwater Technology.

Groundwater Technology - Ciba-Giegy representative for
excavation supervision and coordination

On Site Coordinator - Ray Duchaine

Environmental Transport Group, Inc. (ETG) - Hauling of
excavated material

CECOS - Disposal of excavated material

ETG Transport ID # NJD 000692061

Disposal Facility ID# NYD 080336241

Dale Fleck - Excavation Contractor

Monsey Products Company - Present owner of site

Emergency ID# - PAP 000001060

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III. ON SITE COORDINATOR

The remedial action program will be managed and supervised by Groundwater Technology's On Site Coordinator (OSC). The OSC will control all phases of the work effort within the designated work area. These efforts include, but are not limited to, the following:

- Determination of work area boundaries
- Determination of traffic patterns
- Determination of appropriate excavation and backfill methods.
- Determination of excavation limits
- Procurement of representative samples
- Insuring proper loading methods
- Insuring equipment cleanliness prior to exiting work area
- Determination of site access
- Compilation of complete written and photographic logs
- Coordination of sampling and measurement efforts
- Determination of adherence to proper safety procedures
- Work scheduling
- Determination of program completion

The OSC will possess the ultimate decision-making power within the work area during program implementation.

IV. SITE ACCESS

The work area will be delineated into three (3) areas; A, B, and C (Figure 2).

- Area A will be the exclusion area and will consist of the immediate pit areas, loading areas, and ten

feet beyond. Access to these areas will be restricted to the OSC, sampling and testing personnel, and the equipment operators.

- Area B will be considered the restricted area and will consist of the general work and traffic areas surrounding Area A. Access to this area will be restricted to essential personnel and equipment unless otherwise approved by the OSC. Areas A and B will comprise the on-site work area.
- Area C will consist of all areas beyond Area B and will be considered the support area. Permissible entry and exit between Areas B and C will be restricted to a single access gate and will be controlled and recorded by on-site personnel located at a work trailer at this point (Figure 1). A sample site access log for personnel is presented in Figure 4.

Entry to and exit from Area B by all persons and equipment will be subject to the approval of the OSC. All site areas will be adequately posted through the use of fencing, stakes, and signs. Restricted area access at times other than site working hours will be limited to the OSC or his designated representative(s).

V. EQUIPMENT AND EXCAVATION

A. Delineation of Area to be Excavated

Boundaries of the areas to be excavated will be marked with steel posts by GT personnel prior to the commencement of excavation. Excavation shall not exceed these boundaries unless specifically required by the OSC.

B. Equipment to be Used

The pits shall be excavated using a tracked front-end loader unless otherwise directed by the OSC.

C. Method of Excavation

The approach and method of excavation shall be determined by the OSC, in conjunction with the excavation contractor. The anticipated excavation path for each lagoon is illustrated in Figure 3. Due to confined working area, it is anticipated that the excavation will be limited to front-face excavation techniques, in successive layers if necessary.

D. Order of Excavation

The planned order of excavation is lagoon #9 first, lagoon #7 second, and lagoon #5 last. This schedule may be altered as required by the OSC.

E. Excavation Limits

Vertical and horizontal excavation limits will be determined by the OSC through the use of photoionizer measurements and visual assessments. Upon such a determination, the dimensions of the excavated area will be recorded, representative samples will be taken, and no further excavation shall occur.

F. Marker Horizon

Upon completion of excavation, a marker horizon will be placed prior to backfilling to denote the lower excavation limit. This marker bed will consist of material which can be readily differentiated from native soils, and shall be placed to a minimum thickness of two (2) inches.

G. Backfilling Procedures

Immediately subsequent to placement of the marker horizon, the open excavation shall be backfilled with soil materials approved by the OSC. The backfill operation will be performed by a separate piece of equipment not used during pit excavation. Backfilling shall be accomplished as rapidly as possible to minimize the amount of time which the excavated area remains open. Lagoon #9 will be initially backfilled to one (1) foot below grade to allow for equipment cleaning procedures (See Section IX). If backfilling of pits is not accomplished during the same day of excavation, the excavated pit will be enclosed by a snow fence to inhibit access.

H. Erosion/Runoff Control

The excavator shall place hay bales or other devices as necessary to minimize and control soil erosion and runoff into and away from excavated lagoon areas prior to the completion of the backfilling effort. A protective cover (plastic tarp) may be placed over an excavated, partially excavated, or partially backfilled lagoon at the end of the work day dependant on weather conditions and work schedule.

I. Excavation Closure

All excavations will be backfilled a minimum of three (3) feet above grade at center and adequately sloped to direct runoff away from the excavated area.

J. Revegetation

The disturbed areas within and around areas of excavation will be revegetated in a timely manner with fast growth ground-cover such as fescue or vetch to minimize potential erosion and siltation. Erosion control devices will remain in place until deemed unnecessary by the OSC.

VI. SOILS LOADING AND HAULING

Loading of excavated soil will be confined to specifically delineated loading areas for each lagoon (Figure 3) which will be included within the exclusion area (Figure 2). All trucks will be polyurethane lined and tar-sealed upon entering the restricted area.

Trucks will be routed into and staged within Area B along a designated route (Figure 1). Subsequent to loading, the exterior of each truck will be checked and cleaned if necessary. The condition of each truck will be checked and logged upon entering and exiting the site area. Appropriate manifests will be completed and logged for each truck prior to leaving the site.

VII. SITE SAFETY PROCEDURES

A. Protective Clothing

All personnel entering Area B will be required to wear protective shoe covers, hardhat, and safety glasses. All personnel working in and around Areas A will be required

to wear full protective suits, including shoe covers, coveralls, and gloves. Protective clothing will be removed and, if necessary, disposed of prior to exiting Area B. Suitable covered disposal containers will be provided at the site clean up area (Figure 1). The OSC may at any time require additional protective clothing within Area B should it be deemed necessary. Discarded protective clothing will be periodically removed from the site and disposed of in an appropriate manner.

B. Air Quality Monitoring and Protection

Air quality within and around Areas A will be monitored through the use of an hNu photoionizer. Readings will be taken by lowering the instrument into the excavation area subsequent to each pass of the excavating equipment. Supplemental readings will be recorded within fifty (50) feet of the excavated area in the downwind direction at thirty (30) minute intervals throughout the course of excavation. All readings will become part of the OSC's daily log. Two (2) cartridge respirators and self-contained breathing (air pack) units will be available at all times within the work area should their use be necessary. The designated levels for cartridge respirator use and air pack use are 150 ppm and 400 ppm respectively. The lower of these numbers is the eye irritation level, the higher number the unsatisfactory rating listed for trichloethylene by the "Handbook of Environmental Data on Organic Chemicals" Second Edition.

Although not expected, should such levels be detected applicable site personnel will immediately don the appropriate breathing apparatus as designated by the OSC. The OSC will also instruct the clearing of any area by all personnel should it be considered necessary. The OSC may also designate lower levels for respirator or air pack use at his discretion.

C. Emergency Equipment

First aid kits, fire extinguishers, and a stretcher will be available at all times in the site trailer located at the access point to Area B. Running water will be available at all times within Area B for cleaning and flushing purposes. Fire extinguishers will also be stationed with the OSC within Area B. Emergency telephone numbers will be posted for fire, police, and medical/ambulance contact at the site trailer together with mapped directions to the closest hospital. Pertinent emergency contacts are noted below.

D. Communications

A telephone will be available for use at the work trailer. On site communications will be maintained by two-way radios. Emergency telephone numbers will be available and posted at the site trailer. Included in these numbers are the following:

POLICE

East Pikeland Township Police	935-2440
Pennsylvania State Police	827-7461

FIRE

Kimberton Fire Department	933-8966
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AMBULANCE

West End Fire Company	933-3110
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HOSPITAL

Phoenixville Hospital	933-9281
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SITE TRAILER

Monsey Products Company	933-8880
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GROUNDWATER TECHNOLOGY

	388-1466
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E. Personal Facilities and Requirements

A wash area will be located within Area B adjacent to the clothing disposal facility (Figure 1). Shower facilities are available in Area C should they be required (Figure 1). Restroom facilities will be available at the access gate to Area B for on-site personnel (Figure 1). A designated lunch period will be scheduled each working day at which time all on-site personnel will be required to exit Areas A and B. No food or drink will be permitted within these areas. Working under the influence of alcohol or illegal drugs is prohibited. All on-site personnel and equipment must be approved for cleanliness prior to exiting the work area by the OSC or his authorized representative.

VIII. SAMPLING PROCEDURES

Upon determination of the completion of excavation by the OSC, representative soil samples will be obtained by designated personnel. Five (5) samples will be taken from each excavated area: one sample from each wall and one sample from the pit floor. Air quality conditions within the pit area will be monitored prior to entry of sampling personnel to determine if protective respiratory apparatus is required. Each sample will be collected into an air-tight jar and immediately removed from the pit area for placement into a dry-iced environment for freezing. These samples will be sent to Lancaster Laboratories, Inc., where a combined sample by weight will be composited. This combined sample will be analyzed for volatile organics and base neutrals according to EPA methods 8010, 8020 and 8270. The remaining sample fractions will be retained by Groundwater Technology pending

analytical results of the combined sample. An all-metal sampling tool will be used to obtain samples within the pit area. This tool will be thoroughly cleaned prior to sampling, between each sample collection, and upon completion of sampling. All sample containers will be cleansed subsequent to sealing.

IX. SITE CLEANUP

Upon completion of the excavation program, the equipment used for excavation will be thoroughly steam-cleaned atop pit #9 which will have been backfilled below grade for this purpose. Subsequent to this cleaning process, the excavator will be removed from pit #9 and perform surface cleaning operations as directed by the OSC. Upon completion of the surface cleaning program, the excavating equipment will be returned to pit #9 over which the bucket will again be steam cleaned. The excavator will then remove the uppermost one (1) foot of backfill material from pit #9 for off-site disposal. When this process has been completed, the excavator bucket will again be steam cleaned, and pit #9 will be backfilled in accordance with the procedure outlined in section IV.G.

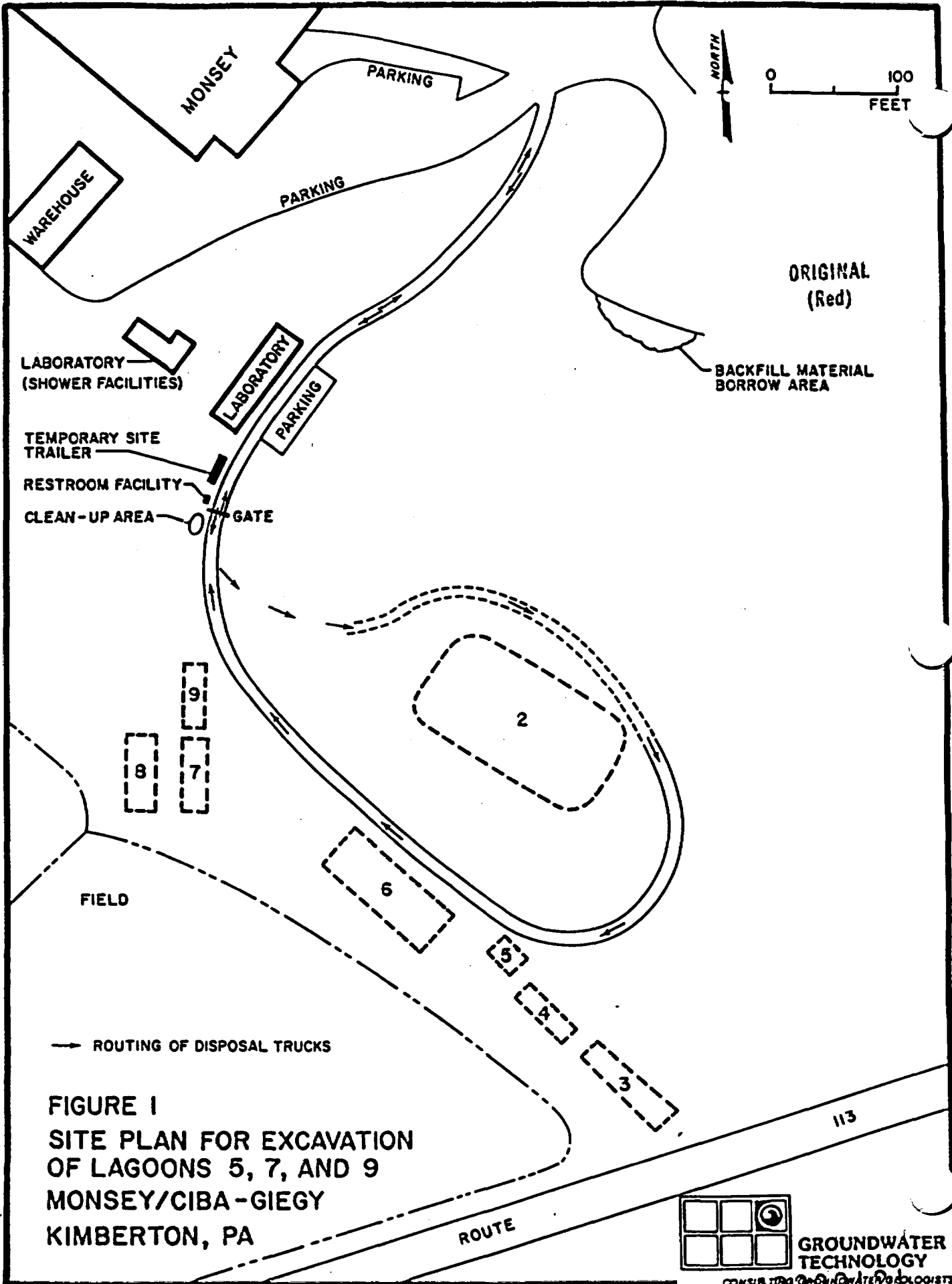
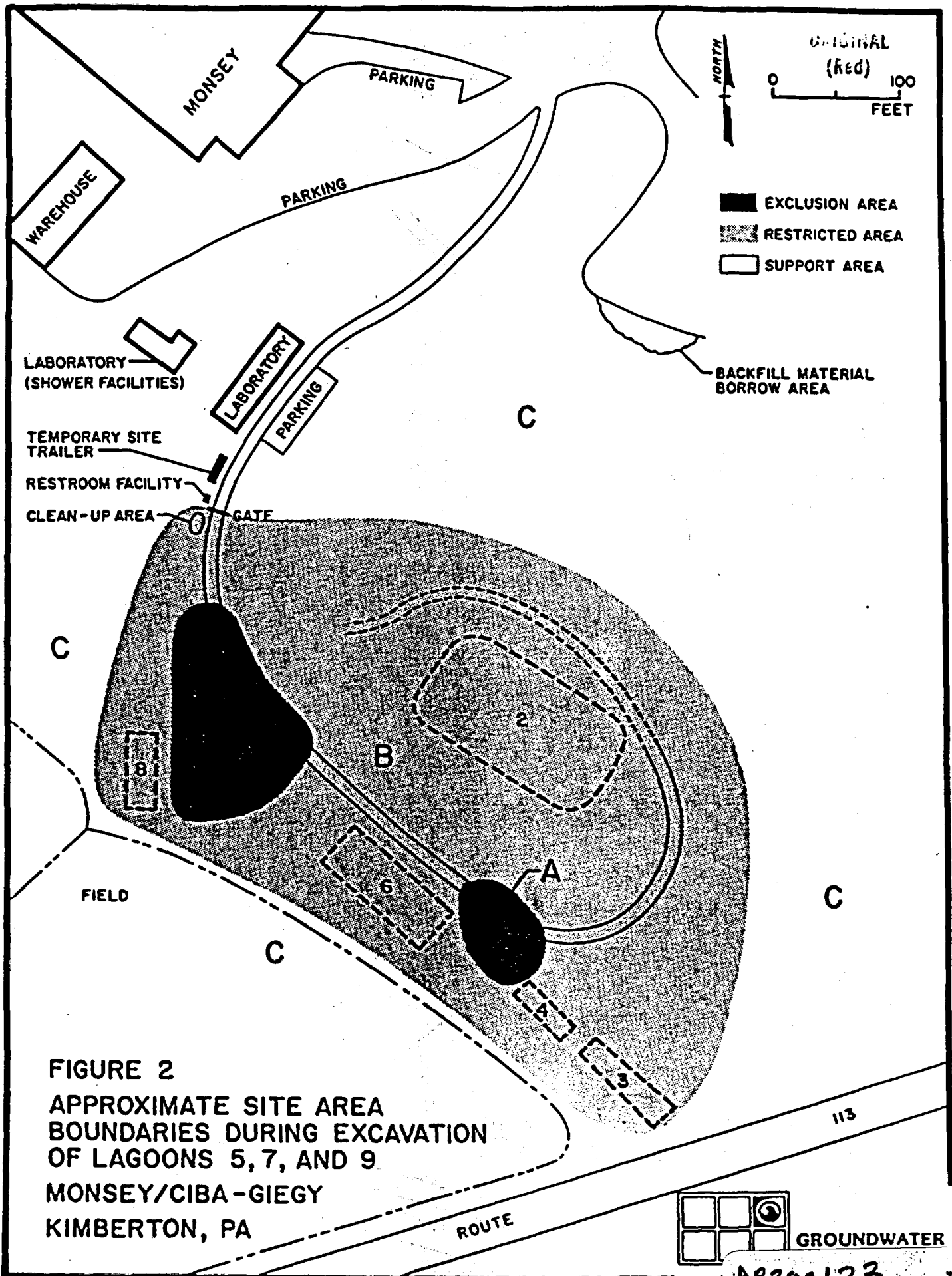


FIGURE I
SITE PLAN FOR EXCAVATION
OF LAGOONS 5, 7, AND 9
MONSEY/CIBA-GIEGY
KIMBERTON, PA



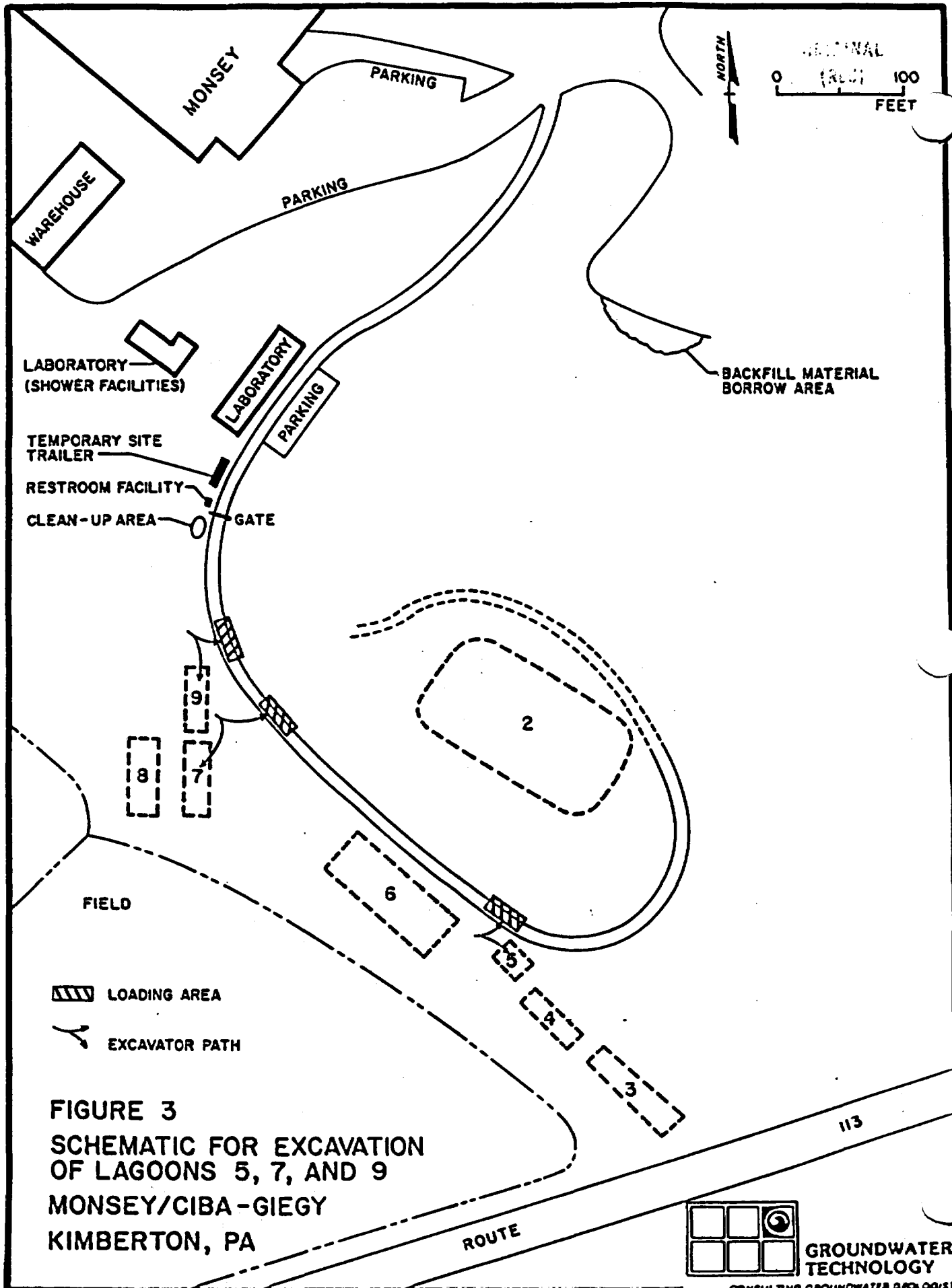


FIGURE 3
SCHEMATIC FOR EXCAVATION
OF LAGOONS 5, 7, AND 9
MONSEY/CIBA-GIEGY
KIMBERTON, PA



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