

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
320 West 4<sup>th</sup> Street, Suite 200, Los Angeles, California 90013

FACT SHEET  
WASTE DISCHARGE REQUIREMENTS  
FOR  
3M PHARMACEUTICALS  
REMEDATION SYSTEM  
TREATED GROUNDWATER BENEFICIAL USE

ORDER NO. R4-2002-0030 (SERIES NO. 34)  
CI-8641, FILE# 03-035

**FACILITY ADDRESS**

3M Pharmaceuticals  
19901 Nordhoff Street  
Northridge, CA 91324

**FACILITY MAILING ADDRESS**

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**PROJECT DESCRIPTION:**

3M Pharmaceuticals is located at 19901 Nordhoff Street, Northridge, at approximately Latitude: N34° 13' 54", Longitude: W118° 34' 13" (Figures 1&2). The underlying groundwater at the site is contaminated with chloroform, perchloroethene (PCE), trichloroethene (TCE), 1,2-dichloroethane (1,2-DCA), Freon-11, methylene chloride, carbon tetrachloride, and gasoline constituents. The site was permitted to treat and dispose of treated groundwater to surface water (Winnetka Avenue storm drain) west of the site, under National Pollutant Discharge Elimination System (NPDES) No. CA 0063312, issued by the Los Angeles Regional Water Quality Control Board (Regional Board).

The groundwater pumping system consists of 15 groundwater recovery wells, and an air stripper groundwater treatment system. Each recovery well contains a submersible electric pump. Sustained flows from each well range from <1 gallons per minute (gpm) from several wells, to 10-12 gpm from well REW-1. The treatment system capacity is 144,000 gallons per day (gpd). The existing NPDES permit allows discharge to the storm drain. Currently, the system treats approximately 60,000 gpd. Approximately 32,000 gpd are beneficially used in the facility's air handling equipment. With the proposed modification, the remaining water that is currently discharged will be infiltrated on site for landscape irrigation.

The main objectives of reusing the treated groundwater are the following:

1. To obtain a beneficial reuse from the treated groundwater by using it for irrigation.
2. Return the treated groundwater to the aquifer to aid prevention of aquifer depletion.

A work plan was developed for the proposed modification to the treatment and irrigation systems. The work plan was approved by this Regional Board in a letter dated July 25, 2003. The Work Plan proposes:

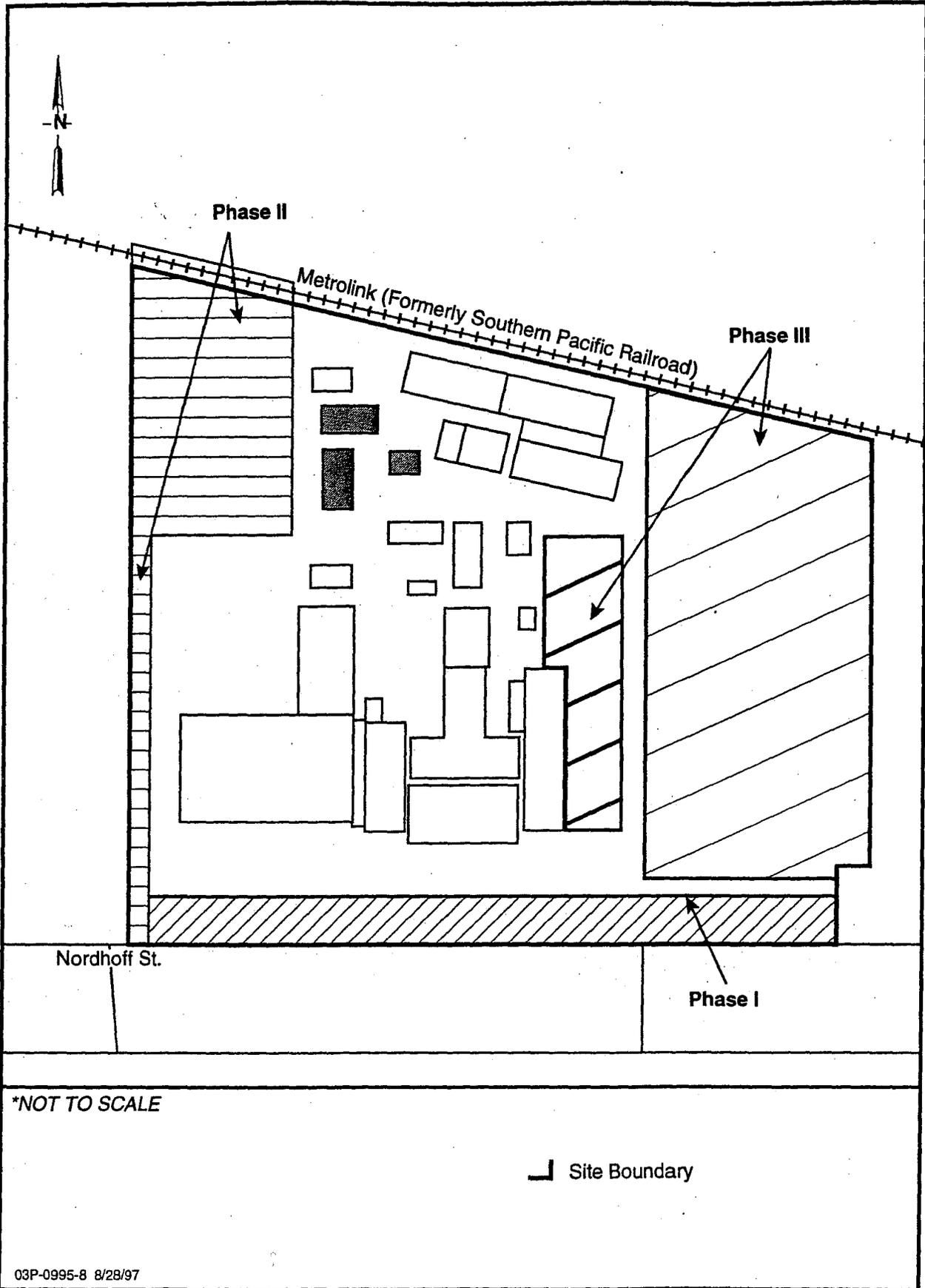
1. To infiltrate treated groundwater to the underlying aquifer beneath approximately 11.5 acres of landscaped and open plant-covered land (Figure 1).
2. That the infiltration system will be placed in operation in three phases. The areas of the three phases are also shown in Figure 1.

3. That the first phase will consist of connecting into the existing irrigation system to supply treated groundwater to the existing landscaped area. The second phase will provide treated water to the open area in the northwest portion and the west boundary of the site. The third phase will supply treated groundwater to the open area north of Building 3 and along the east boundary of the site.
4. To irrigate at night between 8:00 PM and 6:00 AM. Measures are in place to assure that watering will not result in runoff.
5. To properly label all sprinkler heads and valve boxes according to the reclaimed water standard. There will be signs posted to indicate that the irrigation water is reclaimed. The treated groundwater is not truly "reclaimed" water, as it does not originate from domestic-type waste. The intent of the notice is to inform workers, etc. that the water is not potable.
6. The existing treated groundwater discharge line will be diverted from the discharge line with a tee, check valve, and a control valve so that the treated groundwater can be discharged to either the storm drain or the irrigation system.
7. During extended rainy periods, the following alternatives will be available to avoid surface runoff: i) The water level in the holding tank will be maintained at a level to contain at least 3 days of full flow, without any discharge through irrigation; ii) The site's air handling system currently uses approximately 50% of the total volume of treated groundwater, this capacity will not be influenced by rainfall, therefore, if needed, selected interior (source area) wells can be shut off, or have flow rates reduced, while the down gradient wells maintain their flow rates and contain the contaminant plume; iii) In the unlikely event that the holding tank is filled and the air handling system fails, the pumping wells can be temporarily shut down until the air handling system is operating, a short shutdown will not cause a significant loss of plume control. iiiii) It will be possible to make various combinations of these three earlier alternatives to avoid the need for discharge through irrigation.

Groundwater treatment system influent, intermediate, and effluent water will be monitored and analyzed throughout the remediation process according to NPDES permit requirements.

Based on the aforementioned facts and the nature of the treated groundwater (through the remediation system) that will be used for irrigation and groundwater replenishment, it can be concluded that the infiltrated treated groundwater will have no adverse effects on the groundwater quality of the existing uppermost aquifer. On the contrary, the treated water is expected to contain more dissolved oxygen than in the natural aquifer water and this will promote and accelerate the on going bioremediation process beneath the site.

Site activities related to Phase 1 are expected to begin on October 1, 2003, with operation expected by December 1, 2003.



**FIGURE 1 LOCATION OF LANDSCAPED AND OPEN AREAS  
3M PHARMACEUTICALS, NORTHRIDGE, CA**