

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF DECEMBER 4-5, 2008

Prepared October 16, 2008

ITEM NUMBER: 23

SUBJECT: **Spectra-Mat, Inc., Watsonville, Santa Cruz County**
Rescind Individual NPDES Permit No. CA0048976, Order No. R3-2002-0106

KEY INFORMATION

Location: 100 Westgate Drive, Watsonville, Santa Cruz County
Discharge Type: Treated groundwater
Design Capacity: 25,000 gallons per day
Current Flow: 10,000 gallons per day on average
Treatment: Air stripper and granular activated carbon in series
Disposal: Discharge to storm drain and then to West Branch of Struve Slough
Reclamation: Equipment cooling and irrigation
Existing Order: NPDES Permit Order No. R3-2002-0106 (NPDES Permit No. CA0048976)
This Action: Rescission of Individual NPDES Order No. R3-2002-0106

SUMMARY

Staff recommends that the Central Coast Regional Water Quality Control Board (Central Coast Water Board) rescind the current individual National Pollutant Discharge Elimination System (NPDES) Permit Order No. R3-2002-0106 (Individual Permit), Attachment 1. Currently, Spectra-Mat is no longer discharging treated groundwater to surface waters. Spectra-Mat now discharges treated groundwater to the sanitary sewer.

DISCUSSION

Spectra-Mat, Inc.'s (Spectra-Mat) individual NPDES Permit expired on November 1, 2007. Prior to that date, Central Coast Water Board staff recommended that Spectra-Mat apply to enroll in the NPDES General Permit No. R3-2006-0067 for Discharges of Highly Treated Groundwater to Surface Waters (General Permit). On October 30, 2007, Spectra-Mat submitted their General Permit enrollment application. Central Coast Water Board staff administratively extended Spectra-Mat's NPDES Permit Order No. R3-2002-0106 while we reviewed their application.

Site Background

Spectra-Mat started manufacturing dispenser cathodes at 100 Westgate Drive, Watsonville (site) in 1963. Spectra-Mat used tetrachloroethene (PCE) as the common lubricant/coolant in machining certain refractory metals in cathode assemblies. In the 1980's, Spectra-Mat found an alternative to PCE for most machining operations, which greatly reduced their use of PCE. Spectra-Mat now uses less than 1 gallon of PCE annually in one specialized operation that is isolated from the primary machining operations.

Spectra-Mat discovered chlorinated solvents in groundwater at the site in 1982. PCE likely entered the subsurface by a combination of (1) wastewater disposal into a septic system, (2) improper disposal, and/or (3) spills. PCE entered the regional deep aquifer via the filter pack around the on-site water supply well. In July 1984, Spectra-Mat installed new casing and screen, and sealed the annular space to eliminate the pathway for solvents to enter the regional deep aquifer.

Treatment System

Between 1983 and 1996, Spectra-Mat cleaned up groundwater by operating a groundwater extraction and treatment system. In 1996, the Discharger temporarily shut down the groundwater extraction and treatment system to evaluate waste concentration rebound in groundwater and to consider other remedial alternatives. After Spectra-Mat shut down the groundwater extraction system, the solvent plume expanded and re-impacted downgradient groundwater and surface water. Spectra-Mat did not propose alternative remedial actions and began operating the groundwater extraction and treatment system again in January 2000 to contain the solvent plume. In June 2008, Spectra-Mat installed two additional extraction wells to improve containment of the solvent plume.

The treatment system consists of an air stripper and two 1,000-pound granular activated carbon vessels in series. Spectra-Mat discharged treated groundwater to irrigate an onsite lawn area during the spring, summer, and fall months and discharged the treated groundwater to the West Branch of Struve Slough under an individual NPDES Permit during the winter months.

Since 2000, the groundwater extraction and treatment system has extracted and treated 20,700,000 gallons of groundwater and removed approximately 30 pounds of chlorinated solvents.

Discharge Permit

Data submitted in Spectra-Mat's application to enroll in the General Permit demonstrated that the proposed discharge was appropriate for coverage under the General Permit for all constituents except nitrate. The nitrate concentration in an influent sample collected on October 31, 2007 was 35 milligrams per liter (mg/L) as nitrate. The General Permit's receiving water limitation requires that discharges not cause "biostimulatory substances in concentrations that promote aquatic growths causing nuisance or adversely affecting beneficial uses" (page 9, Section D.4). In an email dated June 18, 2008, Central Coast Water Board staff requested that Spectra-Mat perform additional nitrate sampling to determine whether the nitrate concentrations in the discharge pose an adverse affect on the receiving water beneficial uses (West Branch of Struve Slough). On behalf of Spectra-Mat, Remediation Testing and Design, Inc. submitted the additional nitrate sampling data on July 8, 2008. Based on this sampling data, the effluent from this treatment system contains nitrate concentrations that exceed water quality objectives and therefore Spectra-Mat cannot discharge the treated groundwater to surface water under the General Permit.

On July 15, 2008, Central Coast Water Board staff informed Spectra-Mat that they needed to find an alternative means of discharging their treated groundwater. Spectra-Mat was successful in obtaining authorization to discharge the treated groundwater to the sanitary sewer on September 2, 2008. This discharge method does not require a permit from the Central Coast Water Board. Currently, Spectra-Mat is no longer discharging treated groundwater to the West Branch of Struve Slough surface waters, and Spectra-Mat plans to continue discharging their treated groundwater to the sanitary sewer.

In a letter dated October 3, 2008, Central Coast Water Board staff notified Spectra-Mat of our intent to request the Central Coast Water Board to rescind the Individual Permit at the December 5, 2008 meeting.

Spectra-Mat remains under Central Coast Water Board cleanup and monitoring requirements to complete groundwater remediation for this PCE discharge.

Compliance History

Spectra-Mat has remained in compliance with NPDES Order No. R3-2002-0106.

RECOMMENDATION

Rescind Individual NPDES Order No. R3-2002-0106, NPDES Permit No. CA0048976.

ATTACHMENTS

1. Individual NPDES Order No. R3-2002-0106

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