



STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
JOHNSON CITY ENVIRONMENTAL FIELD OFFICE
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May 31, 2017

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RETURN RECEIPT REQUESTED**

Mr. Mark Strong, Environmental Health and Safety Engineer
Ceradyne, Inc., a 3M Company
510 Midway Drive
Midway, TN 37809

Re: **Notice of Violation and
Storm Water Non-Construction Non-Sampling Inspection**
Ceradyne, Inc. a 3M Company
TMSP Permit # TNR053148
Greene County

Dear Mr. Strong,

Robert Tipton from the Division of Water Resources conducted a Storm Water Non-Construction Non-Sampling Inspection on May 17, 2017 at Ceradyne, Inc., a 3M Company. During the inspection, compliance with Tennessee Storm Water Multi-Sector General Permit for Industrial Activities (TMSP) TNR053148, Sector C was evaluated. During the inspection, Division personnel met with you, Mr. Mark Strong, and the Division would like to thank you for your assistance. This letter also serves as a Notice of Violation for monitoring deficiencies discovered during the inspection. Below is a summary of the inspection findings:

I. Permit

The TMSP permit, under Sector C, lists the requirements that shall apply to stormwater discharges associated with industrial activity from a facility engaged in manufacturing the following products and generally described by SIC 2819, Industrial Organic Chemicals, NEC. Coverage under the general permit is effective for Ceradyne, Inc. from May 20, 2015 and shall expire on April 14, 2020.

II. Records and Reports

The Stormwater Pollution Prevention Plan (SWPPP) was updated in 2014; the Storm Water Pollution Prevention Plan (SWPPP) must be updated yearly. All the sections of the SWPPP followed the TMSP for this sector. Records of the employee training were available for review and have been conducted yearly. It was recommended that emergency contact numbers be inserted as the first page in the plan so that, in an emergency, the contacts would be easier to find.

III. Pollution Prevention Team

A pollution prevention team has been appointed for the facility.

IV. Description of Potential Pollutant Sources

Fluids for the maintenance of equipment are kept in a designated storage area, under cover. Spill control materials are available in specific locations located around the facility.

V. Site Map

Permit Section 3.2.2.1 Drainage requires that a site map be developed and included in the SWPPP. The site map must be reviewed when the SWPPP is reviewed and updated as necessary. The site map is current and included in the plan. The site map shows areas of potential contamination, location of spill kits, and the locations of outfalls.

VI. Inventory of Exposed Materials

All chemicals are stored inside. There is a drum storage area near the maintenance department that is inside the facility.

VII. Spills and Leaks

There have been no major spills at the facility in the last year. The fact that there were no spills must be documented at least yearly as required by the general permit. There was no documentation that stated that there had been no spills in 2016.

VIII. Sampling Data

Permit Section 5.1 Analytical Monitoring Requirements requires that the stormwater be analyzed once per calendar year. Ceradyne has been monitoring the wrong parameters because there was confusion as to which Standard Industrial Code (SIC) is the correct code for the facility. The correct SIC for this facility is 2819, Industrial Inorganic Chemicals, NEC. The Notice of Coverage states that the facility is covered under sector C for Industrial Inorganic Chemicals, NEC. Not submitting the correct analytical parameters is a violation of the TMSP. The correct facility monitoring is covered by Table C-3. Benchmarks for Industrial Inorganic Chemicals Monitoring Requirements:

Pollutant of Concern	Benchmark [mg/L]
Ammonia	4
Total Recoverable Aluminum	0.75
Total Recoverable Copper	0.018
Total Recoverable Magnesium	0.064
Total Recoverable Iron	5
Nitrate Plus Nitrite Nitrogen	0.68

Permit Section 5.3.1 Sample Type requires that a minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

IX. Summary of Potential Pollutant Sources

All oils and chemicals are stored inside in designated storage areas. Spill kits are kept near areas of chemical storage. The production of fused magnesia requires a lot of energy, and there are many electrical transformers in the facility needed to supply electricity for the process. It was discussed that oil absorbent socks be used as a precaution to ring transformers in case of a leak.

X. Stormwater Management Measures, Controls, and Good Housekeeping

Stormwater management measures, controls, and good housekeeping procedures were outlined in the SWPPP as required.

XI. Preventative Maintenance

Preventative maintenance procedures are listed in the SWPPP as required.

XII. Spill Prevention and Response Procedures

Procedures for what to do in case of a spill are outlined in the plan. Materials to respond to a minor spill are located in designated areas in the shop and throughout the production areas. All spills are to be reported to the Pollution Prevention Team.

XIII. Inspections

Inspections for leaks and spills and potential problems for storm water are conducted and documented monthly. Quarterly visual inspections and annual comprehensive site inspections are documented and kept for a minimum of three years as required by the TMSP. Inspections are documented as a check sheet that follows the requirements of the TMSP.

XIV. Employee Training

Yearly employee storm water pollution prevention training is conducted, documented, and kept for a minimum of three years as required by the TMSP. This training is documented and kept in a database for review.

XV. Recordkeeping and Internal Reporting Procedures

All records are retained at least three years as required by the TMSP. Employees are instructed to report any problems or concerns to the stormwater pollution prevention team.

XVI. Certification of Non-Stormwater Discharges

The SWPPP had a signed and dated certification evaluating the presence of non stormwater discharges. There were no non stormwater discharges observed during the inspection. All sanitary sewerage is discharged to Mosheim's wastewater collection system.

XVII. Numeric Effluent Limitations

Yearly analytical samples are collected and reported to the Division of Water Resources. There has been some confusion on the analytical tests to be performed, and the correct analytical samples have not been collected as required. The reported analytical results for 2016 are:

Pollutant of Concern	Reported Results [mg/L] Outfall #1	Reported Results [mg/L] Outfall #2	Reported Results [mg/L] Outfall #3
Total Aluminum	1.67	0.550	0.716
Total Recoverable Iron	0.966	0.433	0.498
Total Suspended Solids	14.2	10.4	9.41

There was one exceedance of the total aluminum benchmark concentration of 0.75 mg/L, for outfall number 1. Total suspended solids is not to be analyzed under sector C for SIC 2819, Industrial Inorganic Chemicals, NEC. Total recoverable copper, total recoverable magnesium, and nitrate plus nitrite nitrogen must be added to the sampling analysis. It was discussed that stormwater be collected from one of the three outfalls, analyzed, and reported as a representative sample for the facility. The yearly analytical reports received since the new permit, issued May 20, 2015, have not included all of the required parameters. This is a violation of the TMSF.

XVIII. Facility Site Review

There was no obvious erosion. All areas on site have been vegetated or have riprap to control erosion.

XIX. Outfalls and Receiving Waters

There are four outfalls at Ceradyne, Inc. for the industrial area. The outfalls discharge to a wet weather conveyance between the railroad siding and the facility property. The wet weather conveyance discharges to Pond Creek and then flows to Lick Creek.

XX. Additional Comments

Deficiencies discovered during the inspection were:

1. Not analyzing the correct parameters for the yearly analytical samples. Please sample the required parameters as quickly as a qualifying storm event can be captured and send the sample results to the Johnson City Environmental Field Office within thirty days of receipt of the results.
2. Not updating the SWPPP yearly and documenting the updates as required by the general TMSP. Update the SWPPP and provide a copy to the Johnson City Environmental Field Office.
3. All spills or leaks of toxic or hazardous pollutants that have occurred in areas exposed to precipitation or drain to a stormwater conveyance must be documented as required by the TMSP. If there are no spills or leaks, this must also be documented yearly. Provide the required documentation to the Johnson City Environmental Field Office.

Submit a detailed action plan and proposed implementation schedule to address the above deficiencies by **June 30, 2017**.

XXI. Conclusion

Compliance with TMSP requirements helps to protect fish and aquatic life and stream quality downstream of the outfall, for all Tennesseans. Thank you for your hard work and diligence in protecting water quality in Tennessee. If you have any questions concerning this correspondence, please contact Robert Tipton at (423) 854-5457 or robert.tipton@tn.gov.

Sincerely,



Chris Rhodes
Environmental Manager
Division of Water Resources
Johnson City Environmental Field Office

RT/CR/190217150

Cc: DWR/JCEFO File
DWR Waterlog Database
Robert Tipton, Johnson City Environmental Field Office, Division of Water Resources