



**SOLVAY
CHEMICALS**

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Washington State
Department of Ecology

November 5, 2007

DEPARTMENT OF ECOLOGY

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WATER QUALITY PROGRAM

Kevin Hancock
Washington State Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, WA 98504-7775

RE: Level One Source Control Report for Samples Above the Benchmark Value for Zinc and Nitrate/Nitrite as N at the Solvay Chemicals, Inc. Facility in Longview, WA

Dear Mr. Hancock:

Enclosed are the Level One Source Control Reports for the samples above the benchmark value for zinc and nitrate/nitrite as N at the Solvay Chemicals, Inc. facility in Longview, WA. The zinc and nitrate/nitrite as N values obtained from sampling during the third quarter of 2007 were above the benchmark value, which prompted this report. Please note we are under a Level Three response for zinc that was submitted on May 8, 2007. For reference, I have also enclosed a copy of the Longview facility's Industrial Stormwater General Permit Discharge Monitoring Report from the third quarter of 2007.

If you have any questions or require additional information, please feel free to contact me at 360-577-7567.

Best regards,

Aeris H. Arreguin
Technical Services Supervisor

DEPARTMENT OF ECOLOGY

SO3-000570D

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WATER QUALITY PROGRAMINDUSTRIAL STORMWATER GENERAL PERMIT
DISCHARGE MONITORING REPORTWashington State
Department of EcologyMONITORING PERIOD for (year/quarter): 2007
year

Jan/Feb/Mar

Apr/May/Jun

Jul/Aug/Sep

Oct/Nov/Dec

Facility/Site Information

SOLVAY INTEROX SOLVAY CHEMICALS, INC.
Location: 3500 INDUSTRIAL WAY
County: COWLITZ

Primary SIC Code: 2819

Mailing Information

SOLVAY INTEROX SOLVAY CHEMICALS, INC.
3500 INDUSTRIAL WAY
LONGVIEW WA 98632-8213POSTED
DATE: 11/29/07
INITIALS: JK

You must send a Discharge Monitoring Report (DMR) to Ecology **every quarter**. If there was **no discharge** or you have **suspended sampling** because of consistent attainment of benchmark values, mark the appropriate boxes and send the DMR to Ecology. Please read the instructions before completing the DMR.

| Discharge Point <u>4 - SOUTHEAST OUTFALL (OUTFALL-SE)*</u> | | | | | | |
|---|------------------------------|---------|---------|----------------|-------------|----------------|
| There was no qualifying storm event this quarter so no values are entered below (see explanation) | | | | | | |
| Quarterly Monitoring | | AVERAGE | MAXIMUM | UNITS | Sample Type | Events Sampled |
| pH | <u>Consistent Attainment</u> | | | Standard Units | | |
| Zinc (total) | Consistent Attainment | | 181 | µg/L | Grab | |
| Oil & Grease | <u>Consistent Attainment</u> | | | mg/L | Grab | |
| Nitrate/Nitrite as N | Consistent Attainment | | 0.75 | mg/L | Grab | |
| Phosphorus (TP) | <u>Consistent Attainment</u> | | | mg/L | | |
| BOD5 | <u>Consistent Attainment</u> | | | mg/L | | |

Monitoring associated with impaired waterbodies:

| Discharge Point <u>4 - SOUTHEAST OUTFALL (OUTFALL-SE)*</u> | | | | | | |
|---|------------------------------|---------|---------|-------|-------------|----------------|
| There was no qualifying storm event this quarter so no values are entered below (see explanation) | | | | | | |
| Quarterly Monitoring | | AVERAGE | MAXIMUM | UNITS | Sample Type | Events Sampled |
| Turbidity | <u>Consistent Attainment</u> | | | NTU | | |
| Oxygen, Dissolved (DO) | Consistent Attainment | | 9.92 | mg/L | Grab | |

Additional Metal Sampling

Discharge Point 4 - SOUTHEAST OUTFALL (OUTFALL-SE)*

| Quarterly Monitoring | Maximum | Units | Sample Type |
|----------------------|---------|-------|------------------------|
| Copper (Total) | 5.3 | µg/L | Grab |
| Lead (Total) | ND (1) | µg/L | Grab (1) MOL = 20 µg/L |
| Hardness | 33 | mg/L | Grab |

Level One Response for Sample Above Benchmark Value for Zinc in Q3 2007 (results received 10/29/07)

Date Inspection Conducted: 11/5/07

Inspector: Aeric Arreguin

Evaluation of Possible Sources of Zinc in the Stormwater Discharge

A walkthrough of the facility was conducted; no new potential sources of zinc were identified from the walkthrough. For a complete list of possible zinc sources that have been previously identified, please refer to the inspection reports dated 2/7/05 and 9/27/06.

During the second quarter of 2007, some galvanized fencing in the area immediately south of our hydrogen plant was removed. This fencing was initially installed as a security barrier around the NW Natural Gas metering station that was once the feed to our reformer. The metering station was removed in 1996/1997 but the fence remained until 5/8/2007.

Identification of Source/Operational Control Methods by Which the Permittee Can Further Reduce Stormwater Contamination

No source/operational control methods exist to further reduce stormwater contamination.

Evaluation of Any Improvements or Changes to the Stormwater Pollution Prevention Plan Warranted to Control the Benchmark Parameter

No improvements or changes to the SWPPP are warranted to control zinc at this time.

Level One Response for Sample Above Benchmark Value for Nitrate/Nitrite as N in Q3 2007 (results received 10/29/07)

Date Inspection Conducted: 11/5/07

Inspector: Aeric Arreguin

Evaluation of Possible Sources of Nitrate/Nitrite in the Stormwater Discharge

After completing a walkthrough of the entire site, the following potential sources were identified (which were identified in the 17-Aug-05 level one response for Q3 2005 and the 27-Sep-06 level one response for Q3 2006):

- Hydrogen peroxide (H_2O_2) storage tank farm basin and u-drains in H7 (distillation sector) – The basin always contains a small amount of H_2O_2 from draining pumps and filters when not in use. Likewise, the u-drains in H7 contain H_2O_2 when samples are taken or equipment is drained. The basin and u-drains are made of concrete and appear to be in great condition overall (i.e. no cracks or obvious settling), and we do not suspect that any liquid is seeping out of the basin or the u-drains. However, the u-drains and the area where the u-drains drain into the tank farm basin are beginning to show some wear. H_2O_2 contains both nitrate and phosphorus, and since we have never witnessed elevated levels of phosphorus in our stormwater samples, it is unlikely that nitrates present in the stormwater are from H_2O_2 seeping out of the basin or the u-drains.
- Loading rack area – Spills of H_2O_2 at the loading rack are typically drained through a u-drain to the tank farm basin. However, a large spill could partially drain into the storm system. Since our H_2O_2 product contains nitrate, the loading rack area is a potential source of nitrates. However, no large spills have occurred at the loading rack for many years due to a number of systems in place to prevent overfilling of shipment vessels. In addition, a similar concentration of phosphorous and nitrate is present in our H_2O_2 , and we have never witnessed elevated levels of phosphorous in our stormwater samples. Therefore, it is unlikely that nitrates present in the stormwater can be attributed to H_2O_2 .
- Soil – The land that our facility is on was once a farm, and the nitrate/nitrite in our stormwater could be residual in the soil from farming fertilizer.

One additional source was identified: spills of ammonium nitrate or sodium nitrate in uncontained areas that drain to the stormwater pond. There have been a few small spills of ammonium nitrate in the past few years, but standard protocol is to scoop up spilled ammonium or sodium nitrate pellets immediately after the spill, so no significant residual from spills should enter the storm drain system.

In summary, the only remotely credible sources of nitrate/nitrite from our operations are ammonium nitrate and sodium nitrate spills, the tank farm basin, and the loading rack area. However, it is more likely that residual nitrate/nitrite from fertilized soil is contaminating the stormwater.

Identification of Source/Operational Control Methods by Which the Permittee Can Further Reduce Stormwater Contamination

A maintenance notification had been entered to inspect the tank farm basin and determine if any repairs are warranted. No necessary repairs were discovered.

A maintenance notification had been entered to inspect the u-drains in H7 and determine if any repairs are warranted. No necessary repairs were discovered.

An Engineering Service Request has been written to improve the drainage/containment in the loading rack area to prevent large spills from contacting the gravel.

Evaluation of Any Improvements or Changes to the Stormwater Pollution Prevention Plan Warranted to Control the Benchmark Parameter

No improvements or changes to the SWPPP are warranted to control nitrate/nitrite at this time.