[redacted] ISWGP CASE STUDY – LEVEL 3 RESPONSE EXAMPLE

Primary SIC Code and General Description of Facility: **SIC 3084 Plastics Pipe**

Pollutant parameter that triggered Level 3 Response: **Turbidity**

Quarters that exceeded Action Level: **3rd Q 2005, 1st, 2nd and 3rd Q. 2006, 2nd and 3rd Q 2007 and 1st Q 2008.**

Date that Level 3 Report was due: **October 2007**

Date Level 3 Report was submitted: **May 2008**

Was Level 3 report adequate: **No**
Brief summary of why Level 3 response was adequate or not adequate:

**Level 3 reads more like a Level 2 with the exception of letter "f. New building or grinding with premium filtration unit." Although the filtration unit is a capital expense it is designed as a source control technology. So, no stormwater treatment BMPs have been proposed for this ongoing exceedence.**

Was Level 3 response (implementation of additional BMPs/treatment) adequate? **No**
Brief summary of why Level 3 implementation was adequate or not adequate:

**Did not address turbidity source or treatment for soil from "neighboring trucking event." No mention of catch basin filter sock or plans for additional treatment.**

Following implementation of Level 3 response, how has stormwater discharged quality changed? (Meet BM? AL? etc.)

**One Q below BM. Not enough data to determine.**

Attachments:
DMR Data Summary Table – using "DMR Pivot Analysis" in WebWPLCS
Copy of scanned Level 3 Report (w/identifying information redacted)

DEPARTMENT OF ECOLOGY

APR 07 2008

WATER QUALITY PROGRAM

[redacted]

To: DEQ

[redacted]

Date: April 2, 2008

Subject: [redacted]

The Turbidity level is high at these testing periods and exceeded the benchmark, thus we have implemented a Level Three Response accordingly.

We have walked our facility and found that the gravel lot area is contributing to the turbidity issue. This section of the parking lot is used by both [redacted] when trucks are moved from the docks to parking. We have patched multiple pot holes in the parking lot to eliminate other sources of mud and dirt from the storm water. These actions have shown some improvement as demonstrated by our 2008 quarter 1 lab results. We have begun discussions with the owner of the property regarding the gravel area and future steps to eliminate dirt run off from this area to make additional reductions in the turbidity levels.

Test Results 2007 and 2008 QTR 1

| | QTR 1 | QTR 2 | QTR 3 | QTR 4 | 2008 QTR 1 |
|---|---|---|---|---|---|
| Turbidity | 272 NTU | ND | 2640 NTU | 734 NTU | 62.8 NTU |

If you have any questions, please let me know.

ISWGP CASE STUDY – LEVEL 3 RESPONSE EXAMPLE

Primary SIC Code and General Description of Facility: SIC 2411 Logging

Pollutant parameter that triggered Level 3 Response: $BOD_5$ and turbidity

Quarters that exceeded Action Level for $BOD_5$: 1st Q 05, 2nd Q 05, 4th Q 05, 1st Q 06, 4th Q 06, 1ST Q 07, 1st Q 08, and 2nd Q 08

Quarters that exceeded Action Level for turbidity: 1st Q 05,2nd Q 05, 4th Q 05, 1st Q 06, 2nd Q 06, 4th Q 06, 1ST Q 07, 1st Q 08, and 2nd Q 08

Date that Level 3 Report was due: March 31, 2007

Date Level 3 Report was submitted: 1st Level Three Response May 16, 2006;
2nd Level Three Response June 20, 2007, and 3rd Level Three Response April 7, 2008

Was Level 3 report adequate: First one yes, second and third ones no.

Brief summary of why Level 3 response was adequate or not adequate:

> Their May 16, 2006 Level Three Response was adequate. They had built a storm pond system and were adding additional weirs to the pond to for longer holding times, and planted more vegetation for filtration.
>
> Since their second Level Three Response was not adequate. They had Action Level exceedances in 5 out of 7 sampling events. They filed the Level Three Action Level Response in June 20, 2007 stating, "The BMP responses to address elevated pollutant concentrations are common". They claim the trend for turbidity and $BOD_5$ is going down, so they believe their response is adequate. But, the trend was not going down and they needed to do something more with treatment to get the numbers below the benchmarks.
>
> In May 2008 they filed a third Level Three Action Level Response stating that was not adequate. They stated, "Since the establishment of a bio swale the turbidity and BOD concentrations have had a downward trend"; "more seeding in the bio swale will be done" and, "The mill considers that a treatment BMP consistent with the Western Washington Storm Management Manual has been provided".

Was Level 3 response (implementation of additional BMPs/treatment) adequate? Yes and No
Brief summary of why Level 3 implementation was adequate or not adequate:

> Yes: The first Level Three Action Level Report had structural changes and treatment which was an appropriate response.

No: The second and third Level Three Action Level Reports did not have additional structural changes or effective treatment. The report only had changes to the existing stormwater management system that by design was not adequately treating their stormwater.

Following implementation of Level 3 response, how has stormwater discharged quality changed? (Meet BM? AL? etc.)

While the stormwater contaminate levels have dropped, they are not below the Action Levels let alone the Benchmarks. The system acts as if it is not large enough to treat all the stormwater from the log yard. They need to look into expanding the size of their system, or develop better treatment. They feel what they have done is sufficient to meet the requirements of the Western Washington Stormwater Manual, and required to do more beyond adjusting their present system to try and gain better results.

Attachments:
DMR Data Summary Table – using "DMR Pivot Analysis" in WebWPLCS
Copy of scanned Level 3 Report (w/identifying information redacted)

ISWGP CASE STUDY – LEVEL 3 RESPONSE EXAMPLE

Primary SIC Code and General Description of Facility: SIC 3479; Metal coating and allied services

Pollutant parameter that triggered Level 3 Response: Zinc

Quarters that exceeded Action Level: 1st Q 05, 2nd Q 05, 3rd Q 05, and 4th Q 05

Date that Level 3 Report was due: Dec. 31, 2006

Date Level 3 Report was submitted: Dec. 28, 2006

Was Level 3 report adequate: Yes
Brief summary of why Level 3 response was adequate or not adequate:
The report contained the required information listed in the Level Three Response Actions 1-5.

Was Level 3 response (implementation of additional BMPs/treatment) adequate? Qualified yes
Brief summary of why Level 3 implementation was adequate or not adequate:

The source, operational and treatment BMPs described in the report were implemented, but the facility's stormwater discharge is still above the zinc 117 ug/l benchmark. In addition, it was discovered that stormwater from one area of the facility was not connected to the treatment system.

Following implementation of Level 3 response, how has stormwater discharged quality changed? (Meet BM? AL? etc.)

Before the level 3 response was triggered, the average quarterly zinc value for stormwater discharged in 2005 was 48,000 ug/l. After stormwater treatment (passive adsorptive filtration technology) was installed in October 2007, the average zinc value for treated stormwater was 225 ug/l for the first and second quarters of 2008. The average zinc value for stormwater which was not treated was 7765 ug/l for the first and second quarters of 2008.

Attachments:
DMR Data Summary Table – using "DMR Pivot Analysis" in WebWPLCS
Copy of scanned Level 3 Report (w/identifying information redacted)

ISWGP CASE STUDY – LEVEL 3 RESPONSE EXAMPLE

Primary SIC Code and General Description of Facility: SIC 44XX Water Transportation

Pollutant parameter that triggered Level 3 Response: zinc, oil and grease, TSS

Quarters that exceeded Action Level: zinc 1st Q 05 – 2ndQ 08

Date that Level 3 Report was due: Approximately January 1, 2007

Date Level 3 Report was submitted: February 1, 2007

Was Level 3 report adequate? No
Brief summary of why Level 3 response was adequate or not adequate:

> The report looked thorough but failed to meet the intent of the permit. It attached vendor advertisements and a report with no explanation to its relationship to the selected remedy. In fact, the remedy selected had the lowest percent removal by far.

Was Level 3 response (implementation of additional BMPs/treatment) adequate? No
Brief summary of why Level 3 implementation was adequate or not adequate:

> This Permittee is a large publically-owned facility. The facility has substantial resources and a large environmental department with considerable expertise. The facility has been over the Action Level for zinc every quarter they have monitored since they initiated sampling in the second quarter of 2003 for a total of nineteen separate exceedances. Any Level I or Level II Responses were inadequate and a Level III Response was triggered in the fourth quarter of 2005. A Level III Source Control Report was submitted late on February 1, 2007. The Level III Source Control Report also addressed oil and grease and total suspended solids.
>
> The response never isolated the source of the zinc although privately it was believed to have come from the metal roof based on downspout sampling (verbally reported to be 8,900 ug/L). Interestingly, the roof downspouts do not discharge to the monitoring point. Their discharge point is not monitored. Efforts have been made to assign the source of zinc contamination to atmospheric deposition. The report states catch basin inserts and downspout filters will be installed 13 months after initiating the Level III Response. The inserts were not installed and during the last inspection one of the two downspout filters was disconnected. Since the report was submitted, experimental Filterra units were installed to treat the TSS as part of their municipal stormwater permit. They are not approved for zinc removal.
>
> Despite the Level III Response's failure to reduce zinc concentrations below Action Levels in any of the ten subsequent quarters monitored since the response was initiated, the report states that the maintenance facility may be moved in the future so, "additional

actions beyond those proposed .....are not practical." Zinc levels remain an order of magnitude about the surface water quality standard.

Following implementation of Level 3 response, how has stormwater discharged quality changed?

Discharge has remained above the Action Level for zinc for the past 10 quarters. TSS data is not reported in WPLCS and oil and grease numbers rose during implementation and have subsequently dropped below the Benchmark Value.

**Note:** Zinc data not submitted to Ecology and/or not entered into Ecology's WPLCS database was added to the DMR pivot analysis table.

ISWGP CASE STUDY – LEVEL 3 RESPONSE EXAMPLE

Primary SIC Code and General Description of Facility: SIC 5171; Petroleum Stations & Terminals

Pollutant parameter that triggered Level 3 Response: Turbidity and zinc

Quarters that exceeded Action Level: 4th Q 05, 1st Q 07, 3rd Q 07, 1st Q 08, 2nd Q 08.

Date that Level 3 Report was due: May 15, 2009 * Hard to tell because the facility submitted numerous DMR's that stated "No Qualifying Storm Event Was Experienced" for the first 2 quarters of 06.

Date Level 3 Report was submitted: September 2007

Was Level 3 report adequate: No
Brief summary of why Level 3 response was adequate or not adequate: Sweeping and catch basins filters should have been part of the SWPPP and performed all along.

Was Level 3 response (implementation of additional BMPs/treatment) adequate? No
Brief summary of why Level 3 implementation was adequate or not adequate: For the first 2 quarters of 2008, the zinc levels are still way over the action level.

Following implementation of Level 3 response, how has stormwater discharged quality changed? (Meet BM? AL? etc.) Hard to tell if there has been a marked improvement of stormwater quality. The facility has three outfalls and it's too early to tell if there is a consistent downward trend in levels. (I doubt there will be based on this Level 3 report.)