

M E M O R A N D U M

TO: Pete Hildebrandt, Ron Pine, John R. Raymond, Quemetco File

FROM: Tom McCann

SUBJECT: SURVEY OF STORM WATER DISCHARGE FROM QUEMETCO, INC.,
1600 - 16TH AVENUE S.W., SEATTLE

DATE: December 12, 1971

Objective: To determine the effectiveness of storm water separation and neutralization facilities (current and proposed).

1. Storm and cooling water currently flow to a sump near 13th Avenue Southwest where it is neutralized occasionally with a 50% sodium hydroxide solution (hand dispensed) prior to being discharged to the storm sewer which runs parallel to 13th Avenue S.W. The pH varies widely and so might the lead, antimony and arsenic content.
2. Quemetco plans to collect storm water in the scrap lead and scrap battery area for neutralization and discharge to the sanitary sewer. The combined storm and cooling water reaching the storm sewer after this separation might still need treatment.
3. Quemetco currently uses a seepage pond to accumulate scrap lead plates and lead oxides. This pond is to be replaced with a clarifier. The effect of this pond on storm runoff is unknown.

Expected Results:

1. December or January
 - A. pH of 3 to 8.
 - B. Traces of lead, zinc, antimony and possibly arsenic.
2. June 1972
 - A. pH of 6.5 to 8.5.
 - B. Negligible indications of lead and zinc.

Recommended Sampling Procedure:

1. Collect samples at the sump every 30 minutes for a six hour period on at least one rainy day in December or January and again in May or June when the construction is complete (contact Tom VanZandt, Plant Engineer).
2. Collect samples at the storm sewer outlet to the Duwamish River on the same days.
3. Determine pH, As, Pb, Sb and Zn for the individual samples.

Time Schedule:

The temporary waste discharge permit will expire June 30, 1972, but corrective action might be needed now to prevent heavy metals entering the Duwamish River. Conduct the first series as soon as practical and conduct the final series after storm water separation is completed.

TJM/ch

12-12-71

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M E M O R A N D U M

April 25, 1972

TO: Tom McCann
FROM: Ron Devitt
SUBJECT: Quemetco in Seattle

The following grab samples were taken from Quemetco and the City storm sewer in Seattle on Harbor Island on 4/11/72:

1. Acid Pond
2. Effluent from "neutralization" sump at 0830 hours.
3. Effluent from "neutralization" sump at 0945 hours.
4. Effluent from "neutralization" sump at 1205 hours.
5. Effluent in city sewer manhole N.E. corner of industry.
6. Storm drainage at Bay.

The following results were obtained:

	<u>pH</u>	<u>Conductivity</u> <u>µmhos/cm</u>	<u>Zinc</u> <u>ppm</u>	<u>Lead</u> <u>ppm</u>
Acid Pond	0.8	77,500	1.06	8.0
Sump effluent at 0830	2.7	1,380	--	--
Sump effluent at 0945	1.7	10,240	1.20	20
Sump effluent at 1205	10.4	8.29	.30	31
City sewer manhole	2.4	2,610	.90	17
City sewer at Bay	6.7	1,390	0.26	9.0

These and previous data indicate that the industry has inadequate methods of neutralizing its discharge. Also the industry was in violation of its waste discharge permit requirement thereby demonstrating their need for the proposed modifications.

RD:rc
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