

May 23, 1994

MEMORANDUM

TO: Martin Bauer, Chief
Construction Permits Bureau

FROM: Craig Beeson, Air Quality Engineer 
Construction Permits Bureau

SUBJECT: Permit to Construct Technical Analysis
P-940086 Chemical Lime Company/Tenmile, Soda Springs
(PTC Amendment) (Quarry)

PURPOSE

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01200 (Rules for the Control of Air Pollution in Idaho) for issuing permits to construct.

PROJECT DESCRIPTION

The Permit to Construct (PTC) for the above project is to be amended to correct minor discrepancies in the permit to construct issued on March 22, 1994. The items to be amended are the permit number on pages 1 and 4, and the insertion of the word "hourly" after the word "maximum" in Section 3.2. Neither the emissions nor the ambient air impacts will change as a result of these corrections.

SUMMARY OF EVENTS

On March 2, 1993, DEQ issued PTC No. 029-00026 for the quarry facility at Soda Springs.

On February 2, 1994, DEQ received a letter from Trinity Consultants, Inc., on behalf of Chemstar, requesting PTC No. 029-00026 be amended to correct several discrepancies.

On March 4, 1994, DEQ determined the application for the amendment complete. On March 22, 1994 the amended permit was issued.

On April 18, 1994, DEQ received a request to correct minor discrepancies in the permit issued on March 22, 1994.

A. Discussion

1. Area Classification

Chemstar's Tenmile quarry is located approximately 12.5 miles northwest of Soda Springs in the area designated as attainment or unclassifiable for all criteria pollutants (TSP, PM-10, SO₂, NO_x, Pb and O₃).

As a point of general information, there are no Class I areas within 10 km of the facility, as specified in 40 CFR 81.410.

2. Emission Estimates

Particulate matter emissions were estimated from quarrying operations and were estimated using AP-42 emission factors.

3. Facility Classification

The facility is nondesignated as defined in IDAPA 16.01.01006.25.

The facility is also non-major as defined in IDAPA 16.01.01006.54.

4. Regulatory Review

The facility is subject to the following permitting requirements:

IDAPA 16.01.01202

Facility must submit sufficient information so that a complete facility classification can be done.

IDAPA 16.01.01203.02

Application must indicate compliance with all federal and state emission standards and that the source would not cause or significantly contribute to a violation of any ambient air quality standard.

IDAPA 16.01.01209

Procedures for issuing permits.

Tech Memo
May 23, 1994
Page 4

RECOMMENDATION

Staff reviewed Chemstar's application to amend their Quarry PTC which was re-issued on March 22, 1994. Based on review of that application, and all federal and state air quality regulations, staff recommend Chemstar be re-issued an amended PTC for the quarry.

CB/ve/skr:CHEMQUAR/CHEMQ.TM

cc: R. Wilkosz/TSB
P. Rayne/AFS
SEIRO
COF

<u>IDAPA 16.01.01211</u>	Imposition of reasonable permit conditions, instrumentation and monitoring equipment.
<u>IDAPA 16.01.01212</u>	Obligation to comply.
<u>IDAPA 16.01.01650 & 51</u>	Fugitive dust control.
<u>40 CFR 60.670(a)</u>	NSPS for non-metallic mineral processing.

5. Modeling

Particulate matter emissions were modeled using the ISCST and COMPLEX1 models. Trinity Consultants ran all models utilizing DEQ approved procedures and methods. Only PM-10 (particulate matter with a mean aerodynamic diameter less than or equal to 10 microns -- 40 CFR 51.100) was modeled to show that particulate impacts from the quarry and kiln combined will be below the National Ambient Air Quality Standards (NAAQS). As with the original application, "total suspended particulate (TSP) was not modeled because it was clear that PM-10 impact limits would be more restrictive than TSP limits (Chris Johnson, Meteorologist).

Maximum modeled twenty-four hour ambient PM-10 concentrations were determined to be 122.57 micrograms per cubic meter. Maximum modeled annual PM-10 concentrations were determined to be 35.66 micrograms per cubic meter. All modeling was done in screening mode and was approved by the DEQ meteorologist using a conservative, worst case estimate.

6. Fees

This facility's absolute potential to emit, as defined in IDAPA 16.01.01006.01, is less than one hundred (100) tons per year. The facility is not an affected facility under any New Source Performance Standard. Therefore, registration fees, in accordance with IDAPA 16.01.01530, are not applicable.

May 13, 1994

M E M O R A N D U M

TO: Robert Wilkosz, Chief
Technical Services Bureau (TSB),
Permits and Enforcement (P&E)

FROM: Chris Johnson
Air Quality Meteorologist
TSB, P&E

THRU: Avijit Ray *AV*
Environmental Sciences Manager
TSB, P&E

SUBJECT: Modeling/impact assessment of Chemstar modification
(P-940114)

1. SUMMARY

The applicant operates a quarry and lime plant in Caribou County. The facility is located approximately 10 miles northwest of Soda Springs. The source has a permit, but has requested a modification of operating conditions. Emissions from the proposed operation were modeled. The pollutants considered were PM-10, NOx, CO, SO2, and TAPs.

Maximum impacts were predicted by the applicant to occur at the property boundary, and to be within NAAQS limits. DEQ review accepted the applicants impact assessment, after receiving and reviewing further supporting documentation.

2. DISCUSSION

2.1 Project Description

The applicant is proposing a minor modification to a minor source northwest of Soda Springs. The emissions increase will come from extending the throughput limits on its quarry and lime plant. The facility is in a rural area, and has a large property site.

2.2 Applicable Air Quality Impact Limits

The area, in Caribou County, is considered attainment or unclassified for all criteria pollutants.

The applicant incorrectly states that no PSD baseline date has been set for this air quality region, citing DEQ as a source. This source is in AQCR 61. The correct baseline date is February 18, 1981 for TSP and SO2.

2.3 Background Concentrations

Background concentration was estimated to be 80 ug/m³ 24 hour average and 32 ug/m³ annual average for PM-10, 43 ug/m³ 3 hour average, 11 ug/m³ 8 hour average, and 4 ug/m³ annual average for SO₂ from historical monitoring in Soda Springs, trends from regional monitoring, and technical understanding of pollutant in the rural areas of Caribou County. Other background data used were 9 ug/m³ annual average for NO₂, and 1250 ug/m³ 1 hour average and 875 ug/m³ 8 hour average for CO from regional and national monitoring, and technical understanding of pollutant in the rural areas of Bonner County.

These background concentrations were similar or identical to those used in recent Chemstar and local impact assessments.

2.4 Cocontributing Sources

No cocontributing sources were identified.

2.5 Modeling Impact Assessment

The applicant's consultant used numerous runs of the Industrial Source Complex model, ISC2, and the complex terrain model COMPLEX1 to estimate potential impacts. Emission rates calculated or verified during DEQ engineering review were used along with actual on-site meteorological data. Maximum impacts were predicted to occur at the property boundary, and to be within NAAQS limits.

The impact predictions prepared by the applicant's consultant are documented in their July 21, 1993, Chemstar Lime Company Dispersion Modeling Analysis document. DEQ accepted the applicant's impact assessment after receiving and reviewing further documentation of emissions.

3. MODELING RESULTS

Text descriptions are included in the applicant's Dispersion Modeling Analysis. Electronic copies of model files are on a disk identified as Chemstar 1993 modeling, and are temporarily stored in my \CHEMSTAR directory.

CJ:bmm\chemstar.tec

cc: Craig Beeson
COF 1.1 (w/o attachments)