



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

August 10, 2012

Ken Gagon
Group Vice President
Tessengerlo Kerley, Inc.
2255 N. 44th St., Suite 300
Phoenix, AZ 85008

RE: Facility ID No. 031-00051, Tessenderlo Kerley, Inc., Burley
Final Permit Letter

Dear Mr. Gagon:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2012.0019 Project 61029 to Tessenderlo Kerley, Inc. for the ammonium thiosulfate production facility located at Burley. This PTC is issued in accordance with IDAPA 58.01.01.200 through 228 (Rules for the Control of Air Pollution in Idaho) and is based on the certified information provided in your PTC application received May 15, 2012.

This permit is effective immediately. This permit does not release Tessenderlo Kerley, Inc. from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

Pursuant to the Construction and Operation Notification General Provision of your permit, it is required that construction and operation notification be provided. Please provide this information as listed to DEQ's Twin Falls Regional Office, 1363 Fillmore, Twin Falls, ID 83301, Fax: (208) 736-2194.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Bobby Dye at (208) 736-2190 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends that the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to contact Carole Zundel at (208) 373-0502 or carole.zundel@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

A handwritten signature in black ink that reads "Mike Simon". The signature is written in a cursive, flowing style.

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS\CZ

Permit No. P-2012.0019 PROJ 61029

Enclosures

Air Quality

PERMIT TO CONSTRUCT

Permittee Tessengerlo Kerley, Inc.

Permit Number P-2012.0019

Project ID 61029

Facility ID 031-00051

Facility Location 480 S 250 W
Burley, ID 83318

Permit Authority

This permit (a) is issued according to the *Rules for the Control of Air Pollution in Idaho (Rules)*, IDAPA 58.01.01.200-228; (b) pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit; (c) has been granted on the basis of design information presented with its application; (d) does not affect the title of the premises upon which the equipment is to be located; (e) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (f) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (g) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment. Changes in design, equipment or operations may be considered a modification subject to DEQ review in accordance with IDAPA 58.01.01.200-228.

Date Issued August 10, 2012



Carole Zundel, Permit Writer



Mike Simon, Stationary Source Manager

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1. PERMIT SCOPE

Purpose

1.1 This is the initial permit to construct an ammonium thiosulfate plant.

Regulated Sources

1.2 Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1 REGULATED SOURCES

Permit Section	Source	Control Equipment
2	<u>Package Boiler</u> B600 3.5 MMBtu/hr Propane	None
2	ATS Vent Stack for sulfur dioxide absorber and ATS reactor	HEPA filter

2. **ATS PROCESS**

2.1 **Process Description**

At the ammonium thiosulfate (ATS) plant, the first stage of the ATS process takes place in the sulfur incinerator. There, combustion air reacts with liquid elemental sulfur to form sulfur dioxide.

Immediately downstream of the incinerator, a waste heat boiler will cool the sulfur dioxide and also produce medium to high pressure steam. The cooled sulfur dioxide vapor stream will be sent to the sulfur dioxide absorber in the ATS process area, where it will be mixed with water and ammonia. The resulting solution is typically a liquid ammonium bisulfite solution (ABS). The ABS solution is then routed to the ATS reactor. The vapor stream will be sent to the vent stack filters, which are high efficiency particulate filters that remove particulate, entrained liquid and remaining traces of sulfur dioxide. The liquid removed in the filters is routed back to the absorber, and the vapor stream is sent to the stack and vented to the atmosphere.

At the ATS reactor, liquid from the sulfur dioxide absorber will react with elemental sulfur, ammonia, and water to produce ATS solution. The final product is a liquid and is approximately 60 percent by weight ATS. It will be stored in two ATS storage tanks. The vapor vented from the ATS reactor is also sent to the vent stack filters.

Additional storage tanks will hold raw materials, including elemental sulfur and ammonia. Smaller process tanks, such as the ABS and ATS day tanks, will be located in the process area. The ATS day tank is used for the daily storage of product and is quality checked prior to transfer to bulk storage.

A new cooling tower will provide non-contact cooling water to the ATS Plant to cool the process steam as reactions occur. A package steam boiler will provide steam during start-up. During normal operation, steam will be recovered from the waste heat boiler. Additional loading/unloading areas for rail and truck will facilitate loading/unloading of raw materials and finished product.

2.2 **Control Device Descriptions**

Table 2.1 AMMONIUM THIOSULFATE PLANT DESCRIPTION

Emissions Units / Processes	Control Devices
Boiler	None
ATS Vent Stack for sulfur dioxide absorber and ATS reactor	Vent stack filters, HEPA filter

Emission Limits

2.3 **Opacity Limit**

Emissions from the boiler or ATS stack, or any other stack, vent, or functionally equivalent opening associated with the boiler or ATS reactor, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

2.4 **Allowable Fuels**

Propane exclusively shall be combusted in the boiler.

2.5 **HEPA Filter**

A HEPA filter shall be used to control PM₁₀ emissions from the ATS vent stack.

2.6 **ATS Throughput Limit**

The production rate of ammonium thiosulfate shall not exceed 191.5 tons per any consecutive 24-hour period.

Monitoring and Recordkeeping Requirements

2.7 Throughput Monitoring

The permittee shall monitor and record the rate of ammonium thiosulfate production once per day in order to demonstrate compliance with the ATS throughput limit.

3. GENERAL PROVISIONS

General Compliance

3.1 The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the *Rules for the Control of Air Pollution in Idaho*. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.

[Idaho Code §39-101, et seq.]

3.2 The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

3.3 Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

3.4 Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

3.5 This permit shall expire if construction has not begun within two years of its issue date, or if construction is suspended for one year.

[IDAPA 58.01.01.211.02, 5/1/94]

3.6 The permittee shall furnish DEQ written notifications as follows:

- A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
- A notification of the date of any suspension of construction, if such suspension lasts for one year or more;

- A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and
- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.03, 5/1/94]

Performance Testing

- 3.7 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.
- 3.8 All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.
- 3.9 Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

Monitoring and Recordkeeping

- 3.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

- 3.11 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

Certification

- 3.12 All documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

- 3.13 No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

- 3.14 No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

- 3.15 This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

- 3.16 The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.211, 5/1/94]