Air Quality Permitting
Statement of Basis

January 29, 2007

Permit to Construct No. P-060200

Lewis-Clark Terminal
Lewiston, ID

Facility ID No. 069-00010

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FINAL

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Acronyms, Units, and Chemical Nomenclatures

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
LRO	Lewiston Regional Office
m	meter(s)
MACT	Maximum Achievable Control Technology
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NOx	nitrogen oxides
NSPS	New Source Performance Standards
O_3	ozone
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SOx	sulfur oxides
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

Lewis-Clark Terminal has operated a grain handling facility at the Port of Lewiston since 1975. The facility is a country grain elevator that provides handling and interim storage for regional grain supplies. Grain is transported by truck or rail to the site. Rail transportation has not been used since 2001. Grain is received at one of two truck dumps (north and south) into an angle chute that transfers the grain to an elevator (receiving leg) to the roof. At the roof, a distributor routes the grain to the appropriate storage area.

All conveyors and chutes are enclosed or covered. A food-grade oil is applied to the grain at the truck dumps as necessary (manual activation), and at the shipping conveyor whenever that conveyor is activated. Vacuum systems capture fugitive emissions at each truck dump chute and at the drop onto the shipping conveyor, and transfer the particulate matter to one of two Kice baghouses. Dust from the baghouse hoppers is trucked offsite for use as a cattle feed supplement. Traffic areas are either paved or coated with magnesium chloride every four to five years as needed.

Storage areas include a 1.5 million-bushel flat building, eight 250,000-bushel silos, twenty 3,000- to 64,000-bushel silos, and approximately 40 smaller storage areas. Storage areas for the grain are selected based on the type and quality of the grain.

Grain is shipped by unloading into barges that float the Clearwater River at the south side of the property. When an order is received, the shipping system is activated and grain is dropped from the silo onto the tunnel conveyor where the material is transferred to the shipping leg elevator, then to the barge spout, and then dropped into the barge hold. The terminal operates five days per week, normally from 7 a.m. to 5 p.m., although hours are extended to 9 p.m. during the harvest season in July and August.

3. FACILITY / AREA CLASSIFICATION

Lewis-Clark Terminal is not a designated facility as defined in IDAPA 58.01.01.006. Lewis-Clark Terminal is classified as a natural minor facility because, without permit limits on its potential to emit, the PM and PM_{10} emissions would each be less than 100 tons per year. The AIRS classification is therefore **"**B."

The facility is located within AQCR 62 and UTM zone 11. The facility is located in Nez Perce County which is designated as unclassifiable for all regulated criteria pollutants (PM_{10}, CO, NO_X, SO_2, lead, and ozone). The AIRS information provided in Appendix A defines the classification for each regulated air pollutant at Lewis-Clark Terminal. This required information is entered into the EPA AIRs database.

4. APPLICATION SCOPE

The previous permit for this facility authorized grain elevator operations that included the north and south truck dumps and No. 3 transfer points, with two associated baghouses. The purpose of this permit to construct (PTC) is to replace the expired operating permit for this country grain elevator, and at the permittee's request, to include a permit condition requiring the application of food grade oil dust suppressant to the grain at the North End and South End truck dumps and at the barge loadout shipping conveyor.

4.1 Application Chronology

March 22, 2006	Receipt of Tier II operating permit application.
March 29, 2006	Application determined to be incomplete.
June 22, 2006	Receipt of application resubmittal, minus emission inventory and modeling.
September 28, 2006	Receipt of emission inventory, with determination that modeling was not required.
October 26, 2006	Application determined to be complete. DEQ determined that a PTC should be Issued rather than a Tier II, and requested application fee.
November 15, 2006 through December 14, 2006	Opportunity for public comment provided.
December 15, 2006	Receipt of PTC application fee.
December 19, 2006	Draft permit sent to Lewiston Regional Office (LRO) for review.
December 20, 2006	LRO responded via e-mail that they had no comments. Facility draft permit and statement of basis sent to facility for review.
January 22, 2007	Receipt of $1,000 PTC processing fee.

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action.

5.1 Equipment Listing

Table 5.1 contains the equipment listing and the emissions controls.

Table 5.1 EQUIPMENT LISTING AND EMISSIONS CONTROLS

Source Description	Emissions Control(s)
Grain Receiving and Shipping Total Throughput: 510,000 tons of grain/year North End and South End truck dump chutes and barge loadout shipping conveyor drop vacuum dust collection systems:	North End Truck Dump Baghouse: Manufacturer: Kice Model: 144-10 Bag Dust Filter Fan: Kice FC-23 with 50 hP TEFC 3PH motor Bags: 144, 4.5-in x 10 ft 16 oz Dacron Filter Area: 1,680 square feet Static Pressure: 12 psig Stack height: 48 inches (1.2 meters) Stack equivalent diameter: 0.5 m 19.5" x 22" opening Exit type: Horizontal, no cap Exit air flow rate: 16,000 cfm Control Efficiency: 99.9% South End Truck Dump Baghouse: Manufacturer: Kice Model: 144-10 Bag Dust Filter Fan: Kice FC-23 with 50 hP TEFC 3PH motor Bags: 144, 4.5-in x 10 ft 16 oz Dacron Filter Area: 1,680 square feet Static Pressure: 12 psig Stack height: 33.5 inches (0.8 meters) Stack equivalent diameter: 0.7 m 23" x 33.75" opening Exit type: Horizontal, no cap Exit air flow rate: 20,000 cfm Control Efficiency: 99.9% Food grade oil (applied to grain at the truck dump chutes and barge loadout shipping conveyor). Dust control efficiency estimated at 70%.
Storage Silo Vents (28 silos)	None
Baghouse hopper waste transfer to trucks	None
Vehicle traffic on site roadways	Roads are paved or treated with magnesium chloride every four to five years as needed.

5.2 Emissions Inventory

The original permit authorized grain elevator operations with no limits on the total amount of grain throughput. This permit renewal limits the permittee to a total of 510,000 tons of grain received per year, and therefore constitutes a decrease in the allowable throughput—and allowable emissions—for the facility. The emissions inventory (EI) from point sources at this country grain elevator shown in Table 5.2 provides a starting point for any future changes to this facility. The EI was based on AP-42 Section 9.9.1 emission factors and the assumptions noted in Table 5.2.

Table 5.2 EMISSION INVENTORY

Source	Annual Throughput (tons/yr)	AP-42 PM_{10} EF (lb/ton of grain)	Food Grade Oil Dust Suppressant Control Efficiency	Kice Baghouse Control Efficiency [b]	PM_{10} (lb/hr) [d]	PM_{10} (T/yr)
North End Truck Dump (Baghouse)	135,000	0.021[a]	70%	95%	0.011	0.02
South End Truck Dump (Baghouse)	375,000	0.021[a]	70%	95%	0.031	0.06
Barge Loadout Shipping Conveyor Transfer Point (vented through either truck dump Baghouse)	510,000	0.0040	70%	95%	0.008	0.02
Storage Bin Vents [c]	510,000	0.0063	70%	--	0.255	0.48
TOTAL	**510,000**	**---**	**---**	**---**	**0.31**	**0.58**

[a] Assumes 75% of truck shipments are hopper bottom trucks and 25% are straight trucks. See AP-42, p. 9.9.1-19 (4/03). The emission factors for receipt of shipments by railcar are the same or slightly less than for hopper bottom trucks, so this EI would not increase if deliveries are by rail rather than by truck.

[b] Baghouse design efficiency noted in the application was 99.9%, but the applicant conservatively used only 95% for the EI.

[c] Presumes that each ton of grain is routed to only one silo for storage. Although there are 28 silos, each one sees only a fraction of the total grain throughput.

[d] Annual average, based on 3,774 hours per year: 10 hr/day x 303 day/yr + 12 hr/day * 62 days/yr, as described in the application.

The emissions estimate for facility classification purposes is shown in Table 5.3. These estimates do not include control from oil application or the baghouses. Fugitive emissions do not count toward this classification.

Table 5.3 EMISSION ESTIMATE FOR FACILITY CLASSIFICATION

Source	Annual Throughput (tons/yr)	AP-42 PM EF (lb/ton of grain)	AP-42 PM_{10} EF (lb/ton of grain)	PM (T/yr)	PM_{10} (T/yr)
North End Truck Dump (Baghouse)	313,355	0.05	0.021	7.46	3.23
South End Truck Dump (Baghouse)	870,430	0.05	0.021	20.73	9.14
Barge Loadout Shipping Conveyor Transfer Point (vented through either truck dump Baghouse)	1,183, 785	0.016	0.0040	9.47	2.37
Storage Bin Vents [c]	**1,183, 785**	0.025	0.0063	14.80	3.73
TOTAL	**1,183, 785**	**---**	**---**	**52.5**	**18.5**

[a] Estimated based on multiplying permitted throughput by 8760 hours/3774 hours, with the same assumptions regarding the split on types of trucks as used in Table 5.2

5.3 Modeling

The requirements imposed by this PTC action result in a reduction in the allowable emissions from this facility. Modeling was therefore not required.

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.201.....Permit to Construct Required

The Lewis-Clark facility was constructed in 1975 without first receiving a permit to construct. In 1979, the facility was therefore required to obtain an operating permit, which was renewed in 1984 and expired in 1989. The facility's expired permit status was noted by DEQ in 1996.

As a result of a research project conducted by the National Grain and Feed Association, in 2003, the EPA dramatically reduced the AP-42 emission factors for grain handling (see Appendix B of this statement of basis). This resulted in changing the facility classification for most grain handling facilities from a major source to the synthetic minor or natural minor categories. This was also true for the Lewis-

Clark Terminal. Based on the types of trucks delivering grain to the facility, the Lewis-Clark Terminal is now considered a natural minor source. Federally-enforceable permit conditions are not needed to ensure that this facility does not trigger major source requirements or Prevention of Significant Deterioration (PSD) concerns.

In reviewing the facility's 2006 application to renew their expired Tier II operating permit, DEQ therefore determined that it would be appropriate at this time to replace the Tier II permit with a PTC.

IDAPA 58.01.01.203.....Permit Requirements for New and Modified Stationary Sources

The applicant has shown to the satisfaction of DEQ that the facility will comply with all applicable emissions standards, ambient air quality standards, and toxic increments.

IDAPA 58.01.01.210.....Demonstration of Preconstruction Compliance with Toxic Standards

No TAPs emissions were identified. The facility does not use fumigants. The applicant has therefore demonstrated preconstruction compliance for all TAPs.

IDAPA 58.01.01.224.....Permit to Construct Application Fee

The applicant satisfied the PTC application fee requirement by submitting a fee of $1,000 in response to an October 26, 2006, request from DEQ.

IDAPA 58.01.01.225.....Permit to Construct Processing Fee

The total emissions from the proposed new facility are less than one T/yr; therefore, the associated processing fee is $1,000.00. No permit to construct can be issued without first paying the required processing fee.

40 CFR 60.300 .....Standards of Performance for Grain Elevators

The requirements of this NSPS standard apply to any grain terminal elevator (defined as any plant or installation at which grain is unloaded, handled, cleaned, dried, stored, or loaded) which has a permanent storage capacity of more than 88,100 cubic meters (about 2.5 million U.S. bushels), and which commenced construction, modification, or reconstruction after August 3, 1978.

As described in the application, the permanent storage capacity at the Lewis-Clark Terminal is greater than 2.5 million bushels, and includes a 1.5 million-bushel flat building storage area, and eight 250,000-bushel silos (totaling 2.0 million bushels), in addition to twenty 3,000 to 64,000-bushel silos and about 40 smaller storage areas.

However, the facility was constructed in 1975 and has not been modified or reconstructed after August 3, 1978. This NSPS standard therefore does not apply to the Lewis-Clark Terminal facility.

5.5 Permit Conditions Review

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged. Permit conditions included in this PTC are identified as Permit Conditions. Permit conditions contained in the expired Tier II operating permit are identified as Existing Permit Conditions.

Existing Permit Condition No. 1.1, which imposed pound per hour process weight rate limitations on PM emissions from each baghouse was deleted. Control of emissions is now based on limiting the annual grain throughput (Permit Condition 2.4), and requirements to use of food grade oil as a dust suppressant (Permit Condition 2.8), for baghouse operation (Permit Conditions 2.5 through 2.7), and for the development of an O&M manual (Permit Condition 2.9).

Existing Permit Condition No. 2, which requires reasonable control of fugitive emissions, has been expanded to include the current language applied to similar facilities.

Permit Conditions 2.11 through 2.14 impose new monitoring and recording requirements compared to the expired Tier II permit, which included no specific monitoring or recordkeeping conditions.

6. PERMIT FEES

On December 15, 2006, Lewis-Clark Terminal paid the $1,000 PTC application fee as required by IDAPA 58.01.01.224.

A permit to construct processing fee of $1,000 is required in accordance with IDAPA 58.01.01.225 because the increase in emissions associated with this PTC action is less than one ton per year. Lewis-Clark Terminal paid the $1,000 processing fee on January 22, 2007.

Lewis-Clark Terminal is not a major facility as defined in IDAPA 58.01.01.008.10. Therefore, registration fees to support the Tier I operating program are not applicable in accordance with IDAPA 58.01.01.387.

Table 6.1 PTC PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	**Annual Emissions Increase (T/yr)**	**Annual Emissions Reduction (T/yr)**	**Annual Emissions Change (T/yr)**
NO_X	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM_{10}	0.0	0	0.0
VOC	0.0	0	0.0
HAPS	0.0	0	0.0
Total:	0.0	0	**0.0**
Fee Due	**$ 1,000.00**		

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

On December 19, 2006, an electronic copy of the permit and statement of basis was provided to the Lewiston Regional Office for review. On December 20, 2006, the LRO sent an e-mail stating that they had no comments.

7.2 Facility Review of Draft Permit

On December 20, 2006, an electronic copy of the permit and statement of basis was provided to the facility for review. No comments were received.

7.3 Public Comment

An opportunity for public comment period on the PTC application was provided from November 15 through December 14, 2006 in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments on the application and no requests for a public comment period on DEQ's proposed action.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommend that Lewis-Clark Terminal be issued final PTC No. P-060200 for this country grain elevator. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

CR/bf Permit No. P-060200

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Appendix A

AIRS Information

P-060200

AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

Facility Name: Lewis- Clark Terminal
Facility Location: 1534 3rd Avenue North, Lewiston, Idaho
AIRS Number: 069-00010

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2								
NO_x								
CO								
PM_{10}	B							U
PT (Particulate)	B							U
VOC								
THAP (Total HAPs)								
			APPLICABLE SUBPART					

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B

Letter re: AP-42 Emission Factors for Grain Handling Facilities

P-060200

PACIFIC NORTHWEST GRAIN & FEED ASSOCIATION, INC

May 30, 2003

Mr. Steve Allred
Director,
Idaho Div. of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

Bill R.
Mike S.
Dan P.
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Fax 503 / 227-0059
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Dear Mr. Allred:

Subject: Emission Factors Exempt Grain Handling Facilities From CAA Permit Requirements

Earlier this month, the U.S. Environmental Protection Agency adopted important new grain dust emission factors for federal and state agencies to use in measuring the amount of fugitive dust created by barge-loading facilities in northern Idaho.

We are pleased to share this information with you, because these new emission factors substantially confirm what our industry has been telling Idaho DEQ for more than 10 years about the volumes and content of dust emissions produced from commercial grain processing facilities operating throughout the State of Idaho. These latest revisions also obviate the need for DEQ to consume valuable manpower and resources, monitoring the dust emissions of our member facilities.

Pacific Northwest Grain and Feed Association is a regional trade organization, organized in 1917 to represent and serve the common interests of 210 companies operating in Idaho, and the adjoining states of Washington, Oregon, Utah and Montana. Our member facilities store, process and ship more than one billion bushels of grain annually, and account for 40 percent of the nation's wheat export volumes annually, and 25 percent of total grain shipments from the U.S. to export customers in 40 different countries, on 5 continents around the world.

The new emission factors are the latest results of a major research project conducted by the commercial grain industry through the National Grain and Feed Association (NGFA), based in Washington D.C. This research measured the grain dust emissions generated from loading and unloading barges, as well as loading deep draft vessels. The industry research confirmed these emissions were between 85-97 percent less than EPA's previous estimates, which were based on outdated research findings and false assumptions about grain industry practices.

By agreeing to revise the emission factors sharply downward, EPA has acknowledged that most grain elevators will no longer be classified as "major sources" of air pollution, requiring either federal Clean Air Act permit requirements or compliance monitoring. Instead, our industry is able to provide Idaho DEQ with a very complete set of scientifically reliable emission factors for virtually all shipping, receiving and grain-handling operations.

The NGFA research protocol was developed, reviewed and pre-approved by EPA, whose scientists also participated actively in field tests to measure the quantity of grain dust particulate matter regulated by EPA under the Clean Air Act, as it was being emitted during actual barge-loading and unloading operations, as well as vessel-loading activities.

These research findings were formally submitted to EPA on Nov. 8, 2001, and were later subjected to a public review process by the agency. Following successful completion of the public review, EPA invited the NGFA to submit the industry's recommended changes to the grain dust emission factors.

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Transportation, Elevator & Grain Merchants Association

#41661

Earlier this month, those recommendations were formally adopted by EPA and incorporated into its "AP-42" publication, which contains the federal agency's official emission factors and emission-control strategies for all sorts of industries. This EPA publication also serves as the guide for DEQ and regional air quality control authorities to determine which facilities need to be subject to Clean Air Act permitting requirements and compliance monitoring..

In a related development, EPA officials have also adopted two other industry recommendations to delete references to the silica content of grain dust in its emissions factors; and to include specific guidance on how the grain dust emissions factors contained in AP-42 should be applied. The latter is intended to help Idaho DEQ and neighboring state agencies to interpret and apply the data consistently, within regional air sheds and between jurisdictions.

The federal EPA's newly-revised emission factors for barge and vessel operations are the latest development to an earlier agreement reached between the federal government and our commercial grain industry. In 1998, EPA agreed to abandon its out-dated and flawed calculations of grain dust volumes created during truck, rail and internal grain-handling operations at rural grain elevator facilities, animal feed mills, and grain processing plants. That decision allowed Idaho DEQ to exempt and exclude most grain handling facilities in the state from permit requirements and compliance monitoring.

We are pleased to share these latest developments with Idaho DEQ, and to confirm what we have been telling your agency about our industry for many years. Idaho's commercial grain handlers produce far less dust and air pollutants than was previously assumed, and no longer deserve to be regarded as "major point sources" of air pollution.

These latest findings also provide Idaho DEQ with the assurance and data you need to exempt these facilities from burdensome regulation and unnecessary oversight, and redirect your agency's manpower and resources to more deserving targets.

Sincerely yours,

Jonathan Schlueter
Executive Vice President