

*The Economic Benefits of
Reopening the Agrium Kenai Nitrogen Plant*

Prepared for:
Agrium U.S. Inc.



Research-Based Consulting

Juneau
Anchorage

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Table of Contents

- Executive Summary 1**
 - Redevelopment Phase Impacts..... 1
 - Production Phase Impacts..... 1
- Chapter 1. Introduction 5**
 - Background on Agrium Kenai Nitrogen Operations 5
 - Redevelopment Phase 5
 - Inspection and Assessment 5
 - Renovation 5
 - Production Phase 6
- Chapter 2. Employment and Payroll Impacts of Redevelopment and Production 7**
 - Economic Impact of Redevelopment Phase 7
 - Direct Redevelopment-Related Employment and Payroll 7
 - Indirect Employment and Payroll 7
 - Economic Impact of Production 7
 - Direct Employment and Payroll..... 7
 - Indirect Employment and Payroll 8
 - Other Employment and Payroll Impacts..... 10
- Chapter 3. Other Economic Benefits of Agrium Kenai Operations 12**
 - Kenai Peninsula Borough Tax Revenue 12
 - Agrium Property Tax Payments..... 12
 - Agrium Employee Property Tax Payments..... 12
 - Sales Tax Revenue 13
 - Other Economic Benefits 14
 - Charitable Contributions and Membership Organizations 14
 - Social Impacts 14
 - Population..... 14
 - Student Enrollment and Kenai Peninsula Borough School District Revenue..... 15

Executive Summary

Agrium U.S. Inc. contracted with McDowell Group, an Alaska research-based consulting firm, to quantify the economic impact of reopening the Agrium Kenai Nitrogen Operations located near Nikiski in the Kenai Peninsula Borough.

Before its closure in 2007, Agrium Kenai Nitrogen Operations was one of Alaska's few major manufacturing operations (outside the seafood industry) and contributed significantly to the local and statewide economies. The facility was also the United States' second largest producer of ammonia and urea, consisting of two urea and two ammonia plants, a tidewater port facility, and a power cogeneration facility. At capacity, the plant could use as much as 155 million cubic feet daily (or 53 billion cubic feet annually) of Cook Inlet natural gas.

With reopening of the plant, there are substantial economic benefits to the Kenai Peninsula Borough and Alaska economies. A summary of these impacts are highlighted below:

Redevelopment Phase Impacts

- Redevelopment will include inspection, assessment and renovation of the existing facility, a process that is expected to last 26 months.
- The plant rehabilitation project will require an annual average labor force of approximately 440 workers. The \$200 million project will generate about \$75 million in direct labor income over the redevelopment phase.
- Including all multiplier effects (direct, indirect, and induced effects) the plant rehabilitation effort will account for an estimated 815 annual jobs and \$110 million in total labor income.

Production Phase Impacts

DIRECT IMPACTS

- The production workforce required for a single-train operation (three plants) is estimated at 140 permanent, full-time employees. At full production (a two-train operation, all six plants), 240 workers will be required.
- Annual labor income for the single train operation would total approximately \$14 million. Annual labor income would increase to \$24 million with re-commissioning of the second train. Agrium employees are expected to earn among the highest paid wages in the Kenai Peninsula Borough, perhaps two and half times the Borough's average wage.

TOTAL IMPACTS

- Spending in support of production operations (including purchases of natural gas, as well as variety of other goods and services) will create additional jobs and income in Alaska (indirect impacts). In addition, payroll dollars attributed to Agrium's economic activity circulate throughout the economy creating jobs and income (induced impacts).
- Including direct, indirect, and induced employment, operation of a single train will account for a total of 340 jobs and \$30 million in annual labor income in Alaska.
- Including direct, indirect and induced effects, at full production (two trains), Agrium's Kenai operations will account for approximately 600 jobs and \$50 million in annual labor income in Alaska.

PLANT "TURNAROUNDS" IMPACT

- Most inspection, maintenance and minor repair work is conducted while the facility is operating. However, approximately every four years the plant will be shut down to undergo major maintenance and equipment overhaul, a process called a "turnaround."
- The turnaround may employ as many 1,000 workers over a labor- and capital-intensive four-week period. A budget estimate for this work could range between \$25 million to \$30 million (about which half would be spent on capital equipment).
- Turnaround contractors may employ nonresidents with specialized skills; however, spending by these workers on lodging, food, and other goods and services, have a substantial short-term impact on the local economy.

OTHER ECONOMIC BENEFITS

Kenai Peninsula Borough Tax Revenue

Agrium Property Tax Payments

- Agrium's Kenai operation was once among the largest property tax payers in the Kenai Peninsula Borough (KPB); however, the facility's assessed value declined after closure at the end of 2007. Investment in plant rehabilitation and re-start of operations will once again place Agrium among the top local taxpayers. Estimates of the assessed value of the re-commissioned facility, coupled with the current property tax mill rate, indicate an annual tax payment of \$2.2 million to the Borough, equivalent to about 4 percent of KPB's current property tax revenue.
- If the second train is re-commissioned, Agrium would likely become the largest property tax payer in the KPB.

Agrium Employee Property and Sales Tax Payments

- All of Agrium's employees are expected to live in the Kenai Peninsula Borough and pay property taxes for their homes. Agrium homeowners could pay a combined total ranging from \$242,760 (single-train scenario) to \$416,357 (full production scenario) in Borough property taxes.
- Agrium and Agrium's families will also pay sales tax to KPB and city governments for locally purchased goods and services.
- Total annual sales tax revenue to the Borough related to the Agrium workforce may range from approximately \$265,000 (single-train scenario) to \$467,000 (full production scenario). These estimates do not include sales tax revenues paid by the Agrium-related population to the City of Kenai or the City of Soldotna, where no doubt some Agrium payroll dollars will be spent.

Charitable Contributions and Membership Organization Support

- Once back in production, Agrium is expected to resume its community investment role, supporting local nonprofit organizations and projects. It is also anticipated that future employees will actively give back to their community in volunteer hours, cash and in-kind donations. Agrium is also expected to re-engage in their involvement in civic and business organizations.

SOCIAL IMPACTS

Population

- Re-development and production will directly and indirectly result in population migration into the Kenai Peninsula Borough. Under a single-train scenario, the 340 Agrium-related jobs would support a population of 530, or 0.9 percent of the Kenai Peninsula Borough population. Under full production, the 600 Agrium-related jobs would support a population of approximately 935, or 1.7 percent of the Borough's total current population.

Student Enrollment and School District Revenue

- A portion of Agrium's employees are expected to have school-age dependents that will be enrolled in public schools in the Kenai Peninsula Borough.
- Approximately 130 students (the equivalent of 1.5 percent of current student enrollment) are expected to be enrolled by Agrium families under a single-train production scenario. Under a full production scenario, approximately 220 students (or 2.5 percent of enrollment) are expected to be enrolled.
- This enrollment could represent approximately \$692,250 (single-train) to \$1,171,500 (full production) in state education funding to the District.
- Additionally, as Agrium employees spend money in the community and pay property taxes, and Agrium pays its own property taxes, its presence in the Borough will have a positive impact on local revenue the Borough contributes to the District.

Summary of Economic Impacts of Re-opening Agrium Kenai Operations

Economic Activity	Impacts
Redevelopment Phase	
Expected length of plant rehabilitation	26 months
Direct employment (annual average)	440
Total annual employment (annual average direct, indirect and induced impacts)	815
Direct payroll (Redevelopment Phase)	\$75 million
Total payroll (Redevelopment Phase direct, indirect and induced payroll impacts)	\$110 million
Production Phase (Single-Train Scenario)	
Direct annual employment	140
Total employment (direct, indirect and induced impacts)	340
Direct annual payroll	\$14 million
Total payroll impacts (direct, indirect and induced impacts)	\$30 million
Agrium property tax payment to KPB	\$2.2 million
Total Agrium employee property tax payments to KPB	\$242,760
Total population impacts	531
KPB School District student enrollment	130
KPB School District State foundation revenue	\$692,250
Production Phase (Two-Train – full production – Scenario)	
Direct annual employment	240
Total employment (direct, indirect and induced impacts)	600
Direct annual payroll	\$24 million
Total payroll impacts (direct, indirect and induced impacts)	\$50 million
Agrium employee property tax payment to KPB	\$416,357
Total population impacts	935
KPB School District student enrollment	220
KPB School District State education funding	\$1.2 million

Source: Direct employment estimates from Agrium. All others figures are McDowell Group estimates.

Chapter 1. Introduction

Background on Agrium Kenai Nitrogen Operations

The Agrium Kenai Nitrogen Operations complex is located near Nikiski, 10 miles north of Kenai. When it was built in 1968 (production started in 1969), it consisted of one urea and one ammonia plant. In 1977, the complex doubled in size, adding another urea and ammonia plant with supporting utilities. Agrium purchased the plant from Unocal in 2000, along with Unocal's entire agricultural products business.



At the time of its closure in 2007, the Kenai plant was the United States' second largest producer of ammonia and urea. The Agrium Kenai Nitrogen Operations complex had an annual production capacity of nearly 2 million metric tons. Much of Agrium's Kenai production was destined for overseas markets, including South Korea, Mexico, Taiwan, Thailand, Australia, Chile, New Zealand, and the Philippines. Within Alaska, urea was distributed and sold in small quantities for deicing purposes and agricultural use.

Redevelopment Phase

Inspection and Assessment

The path toward re-initiating operations at the plant will begin with a year-long process of inspecting equipment and assessing the operational readiness of the facility. In addition to creating five full-time positions on the Agrium payroll, this phase will employ 40 to 50 local contract workers to conduct the top-to-bottom inspections. These inspections will provide information necessary to accurately determine the cost associated with returning the plant to production-ready status. This phase will also include initial efforts to identify and potentially secure the natural gas supplies needed to feed the plant. Agrium expects to invest approximately \$6 million in this phase.

Renovation

Assuming plant rehabilitation is not cost prohibitive, and assuming an adequate supply of natural gas can be secured, Agrium would move into a 26-month renovation phase. Preliminary estimates indicate an investment of \$200 million will be required to rehabilitate or replace equipment, machinery and ancillary

facilities, to make the plant production-ready. Approximately \$160 million of this investment is expected to be spent in Alaska. The balance will be spent on equipment manufactured outside Alaska. These numbers are subject to change, pending the outcome of the plant's inspection and assessment phase.

Production Phase

Agrium's Kenai complex includes two production trains comprised of six plants. Plants 1, 2 and 3 are the original train (the south train), which was installed over 40 years ago (in 1968). The second (north) train, plants 4, 5 and 6, was installed in 1977. Agrium will initially restart just the newer train, employing 140 full-time workers. Agrium would restart the second train at a later date, determined largely by the availability of natural gas. The two-train operation would employ 240 workers on a permanent, full-time basis.



Operating at 50 percent of capacity, the operation will consume approximately 75 to 80 million cubic feet of gas per day (75 to 80 mmcf/day) or about 26 to 28 billion cubic feet annually (bcf/year). It will produce 630,000 metric tons of ammonia (about half of which is used in the production of urea) and 620,000 metric tons of urea. With both trains in operation, gas consumption and production of ammonia and urea would be double these amounts.

Chapter 2. Employment and Payroll Impacts of Redevelopment and Production

Economic Impact of Redevelopment Phase

Direct Redevelopment-Related Employment and Payroll

Rehabilitating the plant over a 26-month period will require a large, but temporary, workforce. While specific rehabilitation-phase workforce requirements have not been determined, it is possible to estimate labor requirements based on expected expenditures. Approximately 80 percent of the \$200 million redevelopment budget will be spent in Alaska (the balance will be spent on equipment manufactured outside the U.S.). Economic impact models can be used to estimate the employment effects of spending related to plant rehabilitation. IMPLAN is a widely-used model for measuring the employment and labor income effects of commercial and industrial activity. According to the IMPLAN model, a repair and construction project budgeted at \$160 million over 26 months would require approximately 440 workers. These workers would earn \$37.5 million in labor income annually or about \$75 million in total over the redevelopment-phase.

Indirect Employment and Payroll

The rehabilitation-phase would have additional employment and labor income multiplier effects. As money spent in Alaska in support of the project circulates through the economy, jobs and income are created in the support sector. Again based on IMPLAN analysis, the total employment effect (including all direct, indirect, and induced effects) of the rehabilitation effort would be an estimated 815 jobs and \$55 million in annual payroll over the course of the redevelopment phase.

Agrium Kenai Operations Redevelopment Related Spending, Employment and Payroll

Total Spending	Spending in Alaska	Direct Annual Average Employment	Total Direct and Indirect Employment	Direct Payroll*	Total Direct and Indirect Payroll *
\$200 million	\$160 million	440	815	\$75 million	\$110 million

*26 month total.

Source: McDowell Group estimates.

Economic Impact of Production

Direct Employment and Payroll

As described in Chapter 1, employment for a single-train operation will require a permanent production work force of 140 full-time employees. At full production, (a two-train operation) employment would increase to 240 workers.

Though Agrium has not yet established wage and salary schedules for the reopened plant, it is likely salaries would be among the highest paid in the KPB. In 2002, the average annual wage for Agrium Kenai Operations employees was \$82,584. In 2012 dollars, that would be an annual wage of \$104,634. Wages paid in Alaska's refinery sector may also provide a reasonable proxy for wages at a reopened Agrium plant. In 2011 (the most recent full-



year data), refinery workers in Alaska earned \$114,800, according to Alaska Department of Labor and Workforce Development (DOLWD) data.¹ For purposes of this study, it is conservatively assumed Agrium Kenai Operations wages will average about \$100,000 annually. Based on that average, annual payroll would total \$14 million for the single train operation and \$24 million for the two-train operation.

Total personnel costs, including payroll taxes and benefits, would be approximately 35 percent above payroll (wage) costs. At that labor overhead rate, annual personnel costs would total \$18.9 million for the single train operation and \$32.4 million for two-train production.

Indirect Employment and Payroll

PURCHASES OF GOODS AND SERVICES

Non-payroll spending in support of Agrium operations will create jobs and income in those businesses that provide the goods and services required to support the facility. The single largest expenditure will be for the natural gas that serves as feedstock for the ammonia and urea production process. While the source and price for feedstock natural gas is yet to be determined, it is possible to roughly estimate annual spending on natural gas.

Based on data published in previous studies conducted by McDowell Group, in 2003, Agrium spent \$60.9 million on approximately 38.5 bcf of gas. That averages to about \$1.583 per thousand cubic feet. That price was 69 percent below the prevailing value of Cook Inlet natural gas in 2003 (\$2.288). In 2001, Agrium spent \$80.2 million on approximately 54.2 bcf of gas. That price was 67 percent below the prevailing value of Cook Inlet natural gas in 2001 (\$2.197).

Over the most recent four quarters (2nd quarter 2012 through 1st quarter 2013), the prevailing value of Cook Inlet natural gas averaged \$5.449. If Agrium were to pay 68 percent of that value to secure its necessary feedstock gas, it would pay approximately \$102 million annually for 27 bcf per year to supply a single-train operation and \$204 million annually for approximately 55 bcf per year needed to supply a two-train operation.

¹ Alaska Department of Labor and Workforce Development, Quarterly Census of Employment and Wages, 2011.

In addition to natural gas, Agrium will purchase a variety of other goods and services in support of the Kenai operations. These purchases totaled \$15 million in 2001 (when the plant was operating at full capacity) and \$16 million in 2003 (when the plan was operated at about 75 percent of capacity). Adjusted for inflation, the 2003 expenditures have a current value of approximately \$20 million. While the magnitude of these non-gas expenditures is likely to be somewhat dependent on production volume, for purposes of this study non-gas purchases are assumed to total \$20 million for one and two-train operations.

In 2003, Agrium purchased goods or services from 384 different Alaska businesses scattered across most sectors of the economy. Approximately 210 of those businesses were located within the Kenai Peninsula Borough, with most of the remainder located in Anchorage.

INDIRECT AND INDUCED EMPLOYMENT AND PAYROLL

Spending on natural gas and other goods and services will create additional jobs in Alaska. Jobs and income that are generated as a result of business spending on goods and services are termed “indirect.” Jobs and income are also created when workers employed by Agrium spend their payroll dollars in the local economy. This “induced” employment and income occurs throughout the economy wherever residents spend their income on household necessities, transportation, recreation, health care, other personal services, etc. Together indirect and induced impacts are termed “multiplier effects.”

The most significant potential indirect employment impact would be related to the purchase of large volumes of Cook Inlet natural gas. Approximately 27 bcf/year will be required as feedstock for a single train operation and about double that for a two-train operation. As described previously, Agrium could spend \$102 million (single train) to \$204 million (two-train) annually to secure this gas.

Meeting Agrium’s natural gas requirements locally would require a significant increase in Cook Inlet gas production, which in 2012 totaled 107 bcf. To the extent that new Agrium-related demand for natural gas spurs an increase in gas exploration and development activity, and ultimately an increase in Cook Inlet gas production, jobs will be created in the natural gas production sector. This would include jobs on production platforms and jobs with the wide variety of firms that provide goods and services to gas producers.

In previous studies, the IMPLAN model has provided multipliers for estimating the indirect and induced employment and payroll impacts of Agrium’s Kenai operations. However, because the facility has not been in operation since 2007, up-to-date multipliers are not available. For purposes of this study, McDowell Group modified the older multipliers to account for inflation, changes in natural gas prices, and other factors to develop current multipliers that provide reasonable estimates of indirect and induced employment and payroll related to Agrium’s Kenai operations. The results of the multiplier analysis are presented in the following table.

Production Employment and Annual Payroll Impacts

	Direct Employment	Indirect & Induced Employment	Total Employment	Direct Annual Payroll	Indirect & Induced Payroll	Total Annual Payroll
One Train	140	200	340	\$14 million	\$16 million	\$30 million
Two Trains	240	360	600	\$24 million	\$26 million	\$50 million

Source: Direct employment provided by Agrium. All others are McDowell Group estimates.

In total, restart of the north train will generate a total direct, indirect and induced employment impact of 340 jobs and \$30 million in annual payroll. Operation of both trains would have an employment effect of 600 jobs and approximately \$50 million in annual payroll.

Other Employment and Payroll Impacts

PLANT “TURNAROUNDS”

In addition to the ongoing direct and indirect employment associated with routine production operations (described above), approximately every four years a labor- and capital-intensive plant “turnaround” needs to be performed. Most inspection, maintenance and minor repair work on the plant can be conducted while the facility is operating. However, periodically, the plant must be shutdown to undergo major maintenance and equipment overhaul, a process called a turnaround. A turnaround at Agrium’s Kenai facility can include as many as 1,000 workers employed over a four-week period. The budget for a turnaround would be approximately \$25 million to \$30 million, with about half of that amount spent on capital equipment. Most of the people employed in the turnaround will be contracted nonresident workers with specialized skills who travel from one turnaround project to the next. Nevertheless, spending by these workers on lodging, food, beverages and other things have a substantial short-term impact on the local economy.

EMPLOYEE WAGES

When in production previously, Agrium paid among the highest wages in the Kenai Peninsula Borough. In 2003, Agrium paid a monthly average wage of \$6,882, equivalent to an annual wage of \$82,584. In 2003, that was about two and a half times the economy-wide Kenai Peninsula Borough average of \$33,576. Though Agrium wages would certainly be higher today (or in the near future, after reopening), even the company’s 2003 wages are well above prevailing wages in the borough. Compared to 2011 wages (the most recent available full-year data), Agrium’s 2003 wages are still nearly double the combined government and private sector average. When adjusted for inflation, Agrium’s average 2003 annual wage has a current value of \$104,634, more than double the Borough’s average wage of \$42,156.

High wages are important from a socioeconomic perspective because of increased induced effects (those economic effects related to local spending of payroll dollars in the support sector) and because high wages are more conducive to home ownership, supporting a family, charitable contributions, and other local economic benefits described in the following chapter.

**Agrium Kenai Operations Average Monthly and Annual Wages
versus Kenai Peninsula Borough Average Monthly and Annual Wages**

	Average Monthly Wages	Average Annual Wages
<i>Agrium Kenai Operations (2003)</i>	\$6,882	\$82,584
<i>Agrium Kenai Operations (current value)</i>	\$8,719	\$104,634
All KPB Government Sector (2011)	\$4,090	\$49,080
All KPB Private Ownership (2011)	\$3,325	\$39,900
Total Government and Private (2011)	\$3,513	\$42,156

Source: Agrium (2003) and Alaska Department of Labor & Workforce Development.

Chapter 3. Other Economic Benefits of Agrium Kenai Operations

Re-start of Agrium's Kenai operations will have a range of economic benefits in addition to direct and indirect employment and payroll. This chapter describes and quantifies those benefits.

Kenai Peninsula Borough Tax Revenue

Agrium Property Tax Payments

Ten years ago, when the Agrium plant was in full production, Agrium was the second-ranked property taxpayer in the Kenai Peninsula Borough. In 2002, Agrium paid \$2.21 million in property taxes. Agrium alone accounted for about 5 percent of all borough property tax revenues.

As production was reduced to a single train, the taxable value of the plant declined, as did tax payments. Agrium's property tax payments totaled \$1.02 million in 2006. Most recently, in 2012, Agrium's total property tax bill was \$141,000.

With redevelopment and restart of the plant, Agrium's property tax assessment and tax payment will increase. Since 2002, the mill rate in the Agrium facility's taxing unit has declined from 12.05 to 10.12. If the property is assessed at a value equivalent to the amount invested in re-commissioning the facility (plus the assessed value of the property while it was not in production), the annual tax payment to the Kenai Peninsula Borough would be approximately \$2.2 million. That would place it among the top three largest property tax payers in the borough. In 2012, the Kenai Peninsula Borough took in \$54.1 million in property tax revenues.²

Additional investment to bring the second (south) production train on-line would result in further increase in assessed value, and further increase in property tax payments. Estimates of the cost to bring the south train into production are not available. However, it is likely that with the redevelopment of the second train, Agrium would become the largest property tax payer in the KPB.

Agrium Employee Property Tax Payments

All of Agrium's employees are expected to live in the Kenai Peninsula Borough and pay property taxes on their homes. While some future Agrium employees may already reside in the borough, the new jobs created by reopening the plant will result in an overall increase in population (all other forces in the economy held constant) and an increase in demand for housing, either directly or indirectly. As this increased demand for housing is met, residential property taxes paid to the borough will increase. While it is not possible to predict the assessed value of homes owned by future Agrium employees, general measures can be used to calculate property tax payments.

² Alaska Taxable 2012, Alaska Department of Commerce, Community and Economic Development.

Based on a borough-wide 2012 average taxable value for single-family residences of \$202,429³, taxed at the Borough mill rate of 8.57, and assuming all Agrium employees own their own home:

- Under a single train scenario, Agrium families would pay at least \$242,760 in Borough property taxes exclusive of additional service area and city taxes on residential property.
- Under a two-train scenario, Agrium families would pay at least \$416,357 in Borough property taxes.

Though not all Agrium employees may own a home (some may be renters), these are still conservative estimates. The much higher than average wages earned by Agrium employees would likely translate to larger, more expensive homes than the borough average, and in higher average assessed valuations. In addition, this figure does not include property tax contributions by the population of homeowners affected indirectly by Agrium's activity.

Sales Tax Revenue

While it is not possible to precisely calculate the Borough's sales tax revenue from future spending by Agrium and its employees, it is important to note there will be a positive impact. Kenai Peninsula Borough's 3 percent sales tax revenue results from a complex system of variable taxation depending on specific location of the expenditure, per invoice limit of \$500 regardless of the total value of the product purchased, expenditures by both residents and non-residents, and expenditures by Peninsula businesses and industries that are not exempt from sales taxation due to the resale provision of the sales tax code.⁴

However, given Agrium's potential total impacts could account for 1.7 to 3.1 percent of total Borough employment (depending on single- or two-train production), 3.7 to 6.2 percent of total Borough payroll and 0.9 to 1.7 percent of the Borough's population (see following section of this report for assessment of population impacts), plus Agrium's direct spending on goods and services, it is clear there will be additional direct and indirect sales tax revenues flowing to the Borough as a result of a restart of Agrium operations.

Alaska Taxable 2012, published by the Alaska Department of Commerce and Economic Development, states the per capita sales revenue for the Kenai Peninsula Borough (which levies a 3 percent sales tax) was \$500 in 2012.⁵ This figure includes all sales tax revenue (\$28,385,150) divided by the Borough's 2012 population (56,756). Applying this average to the Agrium-related population, sales tax revenue to the Borough will be approximately \$265,000 (single-train scenario) or up to \$467,000 (two-train scenario). These estimates are also conservative as they do not include sales tax revenues that would be paid by the Agrium-related population to the City of Kenai or the City of Soldotna, where no doubt some Agrium payroll dollars would be spent.

³ Per conversation with Dennis Mueller, Appraisal Manager, KPB Assessing Department (April 18, 2013).

⁴ <http://www2.borough.kenai.ak.us/financedept/>

⁵ <http://commerce.alaska.gov/dnn/Portals/4/pub/OSA%20TAXABLE%202012%20-%20FINAL%202013-02-05.pdf>

Other Economic Benefits

Charitable Contributions and Membership Organizations

Once back in production, Agrium is expected to return to its role as an important local community investor, supporting local nonprofit organizations and projects. While it is not known how much Agrium will contribute to charitable organizations in the future, their corporate history of giving provides some insight to their commitment.

In 2003, Agrium contributed \$194,740 in charitable donations or paid membership fees to 43 nonprofit organizations in Nikiski, Kenai, Soldotna, Homer, and Anchorage. Agrium also provided in-kind support to seven local organizations. These nonprofit organizations ranged from local school programs (in 22 different sports and academic activities), youth athletic and academic programs (17 activities), community services and civic organizations (16), environmental programs (1), senior services (42), and a variety of other health, sport, and economic development programs (19).⁶

Agrium also matched dollar-to-dollar its employees' contributions to the United Way of Kenai. In 2003, the total contribution to United Way, including employee contributions, was \$59,700.

It is anticipated future employees will be like past employees, actively giving back to their community as volunteers and providers of skills, equipment, and material.

In addition, Agrium is expected to fully reengage with local civic and business organizations, such as membership in the Alaska State Chamber of Commerce, Alaska Support Industry Alliance, Resource Development Council, Kenai Chamber of Commerce, North Peninsula Chamber of Commerce, Soldotna Chamber of Commerce, and Kenai Peninsula Convention and Visitors Bureau.

Social Impacts

Population

Re-development and operation of Agrium's Kenai operation will directly or indirectly result in population migration into the Kenai Peninsula Borough. It is safe to assume some new Agrium workers will be drawn from the existing local workforce; however, relatively low unemployment rates in the Kenai Peninsula Borough means the demand for workers will be shifted to other employers (sometimes termed job "back-filling"). The unemployment rate in the Kenai Peninsula Borough averaged 8.4 percent in 2012, the lowest rate since 2008. In August of 2012, the unemployment in the borough was 6.8 percent.

Participation rates can be used to estimate long-term population effects associated with an increase in the number of jobs in a community, region, or state. The participation rate is a measure of the relationship between the number of jobs and the number of residents in an area. Based on Bureau of Economic Analysis (BEA) employment data and population data from the U.S. Census and ADOLWD, the participation rate in Alaska has ranged from 0.63 to 0.65 over the past ten years, averaging 0.64 over

⁶ McDowell Group. *The Economic Impact of Closing Agrium Kenai Nitrogen Operations*, April 2004, p. 12.

that period. This means there has been an average of 64 jobs for every 100 residents in the state. (The job count includes jobs held by residents and nonresidents.) Participation rates vary from place to place, depending on a variety of factors. Larger communities, with better-developed economies, typically have higher participation rates than smaller communities.

Based on participation rate of 0.64, the population effects of restarting Agrium's Kenai operation would be:

- Under a single train operation scenario, the 340 Agrium-related jobs would support a population of 531, or 0.9 percent of the Kenai Peninsula Borough population.⁷
- Under a full production (two trains) scenario, the 600 Agrium-related jobs would support a population of approximately 935 or 1.7 percent of the Borough's total population.

Student Enrollment and Kenai Peninsula Borough School District Revenue

It is anticipated a portion of Agrium's employees will have school-age dependents (between the ages of 5 to 18). Presuming a similar ratio of employee households with school-age dependents as determined in a 2003 study and all students are enrolled in public schools in Kenai Peninsula Borough:

- Under a single train scenario, Agrium families would account for approximately 130 students (or 1.5 percent of the district's enrollment (FY 2013)).⁸
- Under a two train scenario, Agrium families would account for approximately 220 students (or 2.5 percent of enrollment (FY 2013)).

Based on the State of Alaska's public school funding formula, the Kenai Peninsula Borough School District receives funding from the State of Alaska for each student enrolled in its schools. For each Agrium dependent enrolled in the District, funding will differ depending on the size of the school attended, special needs of the student, and other factors. In FY 2013, the District received \$75,858,743 in state foundation funding for an Adjusted Daily Membership of 17,246.⁹ Using a simplified approach, on average, the District received \$5,325 per student. Using current funding as a guide:

- Under a single train scenario, Agrium families would account for approximately \$692,250 in state foundation funding to the District.¹⁰
- Under a two train scenario, Agrium families would account for approximately \$1,171,500 in state foundation funding.

⁷ 340 total jobs divided by the statewide average labor participation rate of 0.64.

⁸ According to the Kenai Peninsula Borough School District, the FY2013 enrollment was 8,892 students.

⁹ Average Daily Membership means the aggregate number of full-time equivalent students enrolled in a school district during the student count period for which a determination is being made, divided by the actual number of days that school is in session for the student count period for which the determination is made (AS 14.17.990).

¹⁰ According to the Kenai Peninsula Borough School District, the FY2013 enrollment was 8,892 students.

The Kenai Peninsula Borough School District also receives local funding support from the Borough government. Most of the borough revenue is generated by sales and property tax. As Agrium employees spend money in the community and also pay their property taxes, and Agrium pays its own property taxes, Agrium's presence will also have a positive impact on local revenue to the District. Additionally, federal revenue is expected to increase with each new student.