

June 28, 1995

MEMORANDUM

TO: Martin Bauer, Chief  
Construction Permits Bureau

FROM: Daniel P. Salgado, Air Quality Engineer  
Construction Permits Bureau

SUBJECT: **PERMIT TO CONSTRUCT TECHNICAL ANALYSIS**  
P-950070 J. R. Simplot Company, Pocatello  
(EDBS - Granulator III Loadout)

PURPOSE

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01.200 (Rules for the Control of Air Pollution in Idaho) for issuing Permits to Construct.

PROJECT DESCRIPTION

J. R. Simplot Company (Simplot) has constructed a new loadout station for products generated in their Granulation III process, which includes triple super phosphate (TSP) and livestock feed. The loadout station is referred to as the East Dry Bulking Station (EDBS). The EDBS is used to store and loadout the products into rail cars and trucks for shipment off of the facility. The EDBS replaces an existing south loadout station, which has been dismantled. The following is a list of equipment which comprises the EDBS.

The TSP section of the EDBS is composed of the following equipment, or equivalent.

One (1) bucket elevator feed hopper;

One (1) bucket elevator feed belt conveyer;

One (1) bucket elevator feed clod breaker;

One (1) two hundred ton per hour (200 T/hr) Rexnord Bucket Elevator;

Two (2) Tyler one hundred ton per hour (100 T/hr) two (2) deck screens with collection hopper;

Three (3) Pebco diverters, one (1) OS14TE, two (2) OS12TE;

Two (2) fifty (50) ton reject bays;

One (1) weighing belt conveyer with Merrick model 465 belt scale;

One (1) reversible belt conveyer;

Two (2) two hundred ton per hour (200 T/hr) rail loading spouts;  
and

Two (2) two hundred ton per hour (200 T/hr) truck loading spouts.

The Livestock feed section of the EDBS is composed of the following equipment, or equivalent.

One (1) bucket elevator feed hopper;

One (1) feed bucket elevator weighing belt conveyer with Merrick model 465 belt scale;

One (1) two hundred ton per hour (200 T/hr) Rexnord Bucket Elevator;

One (1) Pebco OS14TE diverter; and

Two (2) two hundred ton per hour (200 T/hr) rail loading spouts.

## SUMMARY OF EVENTS

Construction of the facility was commenced under the assumption that a Permit to Construct was not required. However, after receiving additional information on September 22, 1994, DEQ determined that, in fact, a Permit to Construct was required, and the facility was notified on October 13, 1994. On March 17, 1995, DEQ received an application for a Permit to Construct from the J. R. Simplot Company, DON Siding Facility. On April 28, 1995, DEQ determined the application complete.

### A. Discussion

#### 1. Area Classification

Simplot is located in Pocatello, Idaho, Power County, air quality control region (AQCR) 61, which is considered non-attainment for PM-10 and attainment or unclassified for all other criteria pollutants.

#### 2. Emission Estimates

Emissions were estimated by the facility and are considered to accurately represent the emissions from the project. The only emissions expected from the EDBS are fugitive particulates generated from screening, transferring, and dropping the product. The fugitive emission rate from this project is estimated at 1.53 pounds per hour or 6.71 tons per year. The facility is almost completely enclosed, except for the lower

section, which is open to allow for trucks and rail cars to enter and exit the facility. The EDBS replaces an existing south loadout station, and offsets from the existing facility may be used. However, the actual emissions from the replaced facility are extremely low, approximately 0.28 tons per year, and do not significantly offset the new emissions. Potential emissions from the replaced south loadout station were estimated at 2.13 pounds per hour or 9.33 tons per year. However, after conferring with Harbi Elshafi, DEQ Air Quality Engineer, and Krishna Viswanathan, DEQ State Implementation Plan (SIP) group, it was discovered that the emissions rate approved by the SIP group was 19.9 pounds per day, which converts to 0.83 pounds per hour or 3.6 tons per year. All emissions estimates are included in Appendix A.

3. Facility Classification

The facility is a designated facility, as defined in IDAPA 16.01.01.006.25 (Rules for the Control of Air Pollution in Idaho), Chemical Processing Plant. The facility is a major facility as defined in IDAPA 16.01.01.006.54, and as defined in IDAPA 16.01.01.008.14. The facility is a fertilizer and industrial chemical production facility SIC 2874.

4. Regulatory Review

The EDBS is a new source, requiring a Permit to Construct.

The following rules and/or regulations were reviewed in this permit analysis:

|                           |  |
|---------------------------|--|
| <u>IDAPA 16.01.01.201</u> | Permit to Construct;   |
| <u>IDAPA 16.01.01.202</u> | Application Procedures;  |
| <u>IDAPA 16.01.01.203</u> | Permit Requirements for New and Modified Stationary Sources;   |
| <u>IDAPA 16.01.01.205</u> | Permit Requirements for New Major Facilities or Major Modifications in Attainment or Unclassifiable Areas; |
| <u>IDAPA 16.01.01.209</u> | Procedures for Issuing Permits;  |
| <u>IDAPA 16.01.01.211</u> | Obligation to Comply; and  |
| <u>IDAPA 16.01.01.220</u> | Category I Exemption;  |

5. Modeling

Modeling was performed on the emissions from the south loadout station as part of a State Implementation Plan (SIP) Operating Permit, and were verified by Krishna Viswanathan. The emissions estimated for Granulation III Loadout from the old south loadout station are just over half of the emissions estimated for this project. The location of this project is not significantly different from the location of the old south loadout station, therefore, since the models are linear, the impact from the old loadout station was doubled to conservatively estimate the impact due to the addition of the EDBS. The PM-10 emissions from the EDBS show an estimated impact of only  $1.4 \mu\text{g}/\text{m}^3$ , which is well below the significant impact level for PM-10 of  $5 \mu\text{g}/\text{m}^3$ . Therefore, this facility is considered not to cause or contribute to an exceedance of any ambient air quality standard.

6. Fees

This facility is a major facility as defined in IDAPA 16.01.01.008.14. Therefore, the facility is subject to registration fees in accordance with IDAPA 16.01.01.526.01. The facility has paid registration fees for 4745.67 tons per year of pollutants required to be registered in accordance with IDAPA 16.01.01.527 as of May 17, 1995. This modification increases the amount of pollutants required to be registered by paying fees by approximately 0.7 tons per year. The increase is calculated using offsets from current permitted emissions, not actual emissions, which explains why the increase for fees purposes does not match the actual increase.

RECOMMENDATION

Based on review of application materials, and state and federal rules and regulations, staff recommend that Simplot be issued a Permit to Construct for the EDBS. No public comment period is recommended, no entity has requested a comment period and the project does not involve PSD Permit to Construct requirements.

DS/dcf: SIMPLOT/EDBS.TM

cc: R. Wilkosz, TSB  
P. Rayne, AFS  
SEIRO  
Source File  
COF

***APPENDIX A***  
***EMISSION ESTIMATES***

### Fertilizer Side

|                                    | Mitigating Features      |                      | Overall Mitigation Effectiveness | Potential Throughput tph | Emission Factor | Emission, lbs/hr | Emission, tpy |
|------------------------------------|--------------------------|----------------------|----------------------------------|--------------------------|-----------------|------------------|---------------|
|                                    | 1                        | 2                    |                                  |                          |                 |                  |               |
| Front End Loader to Hopper         | Enclosed by Building     |                      | 95.00%                           | 200                      | 0.02            | 0.20             | 0.88          |
| Pre-Replacement Emissions Elevator | Enclosed by Building     | Choke Feed           | 99.00%                           | 200                      | 0.02            | 0.04             | 0.18          |
| Chute and Splitter to Screens      | Sealed                   | Enclosed by Building | 99.00%                           | 200                      | 0.02            | 0.04             | 0.18          |
| Screens                            | Enclosed by Building     | Process Sealed       | 99.75%                           | 200                      | 0.02            | 0.01             | 0.04          |
| Rejects to Bay Chutes              | Enclosed by Building     |                      | 99.98%                           | 200                      | 0.02            | 0.00             | 0.00          |
| Bay Chutes to Bays                 | Enclosed by Building     |                      | 95.00%                           | 20                       | 0.02            | 0.02             | 0.09          |
| Product To Weigh Belt              | Enclosed by Building     | Choke Feed           | 95.00%                           | 20                       | 0.02            | 0.02             | 0.09          |
| Weigh Belt to Traveling Belt       | Enclosed by Building     | Choke Feed           | 99.00%                           | 200                      | 0.02            | 0.04             | 0.18          |
| Traveling Belt to Loadout Ch       | Enclosed by Building     | Choke Feed           | 99.00%                           | 200                      | 0.02            | 0.04             | 0.18          |
| Loadout Chute to Transport         | Enhanced Wind Protection |                      | 99.00%                           | 200                      | 0.02            | 0.40             | 1.75          |
|                                    |                          |                      |                                  |                          |                 | 0.85             | 3.73          |

### Cattle Feed and Other

|                            | Mitigating Features      |            | Overall Mitigation Effectiveness | Potential Throughput tph | Activity Emission Factor | Emission, lbs/hr | Emission, tons/yr |
|----------------------------|--------------------------|------------|----------------------------------|--------------------------|--------------------------|------------------|-------------------|
|                            | 1                        | 2          |                                  |                          |                          |                  |                   |
| Front End Loader to Hopper | Enclosed by Building     |            | 95.00%                           | 200                      | 0.02                     | 0.20             | 0.88              |
| Transfer Belt to Elevator  | Enclosed by Building     | Choke Feed | 99.00%                           | 200                      | 0.02                     | 0.04             | 0.18              |
| Elevator                   | Sealed                   |            | 99.00%                           | 200                      | 0.02                     | 0.04             | 0.18              |
| Chute and Splitter         | Enclosed by Building     | Sealed     | 99.95%                           | 200                      | 0.02                     | 0.00             | 0.01              |
| Loadout Chute to Transport | Enhanced Wind Protection |            | 90.00%                           | 200                      | 0.02                     | 0.40             | 1.75              |
|                            |                          |            |                                  |                          |                          | 0.68             | 2.99              |
| South Side Total           |                          |            |                                  |                          |                          | 1.53             | 6.71              |

Notes:

1. The basic emission factor is taken from AP-42 Section 6.8, Ammonium Nitrate Bulk Loading operations, which is a process similar to that here considered.
2. Wind Protected describes an extensive but incomplete enclosure of the activity. An abatement factor of 50% has been taken from the literature and on site experience
3. Enclosed by Building describes a more complete enclosure of the activity such that the activity is largely isolated from all weather influences. An abatement factor of 95% has been used.
4. Sealed refers to a condition less complete than normally expected from process equipment. The effectiveness is taken to be less than '1' due to expected, minor leaks.
5. Process Sealed is a more effective degree of enclosure and more nearly approaches an abatement of '1'. A value of 99.5% has been used.
6. Choke Feed describes the condition where the transferred material flows without experiencing a free falling condition that would normally entrain or create a dusting condition. An abatement factor of 80% has been used
7. Enhanced wind protection refers to near complete enclosure of the activity as in but not as complete as full enclosure in a building. A value of 90% has been used.

**South Side**

Triple Only

39,448 tons loaded out in 1993

Removal Loadout Station

|                            | Mitigating Features  |   | Overall                  | Potential  | Emission | Emission, | Actual        | Potential     |
|----------------------------|----------------------|---|--------------------------|------------|----------|-----------|---------------|---------------|
|                            | 1                    | 2 | Mitigation Effectiveness | Throughput | Factor   | lbs/hr    | Emission, tpy | Emission, tpy |
| Front End Loader to Hopper | Enclosed by Building |   | 95.00%                   | 150        | 0.02     | 0.15      | 0.02          | 0.66          |
| Pre-Replacement Emissions  | Enclosed by Building |   | 95.00%                   | 150        | 0.02     | 0.15      | 0.02          | 0.66          |
| Screens                    | Enclosed by Building |   | 95.00%                   | 150        | 0.02     | 0.15      | 0.02          | 0.66          |
| Transfer Belt to Elevator  | Enclosed by Building |   | 95.00%                   | 150        | 0.02     | 0.15      | 0.02          | 0.66          |
| Elevator                   | Sealed               |   | 99.00%                   | 150        | 0.02     | 0.03      | 0.00          | 0.13          |
| Loadout Chute to Transport | Wind Protected       |   | 50.00%                   | 150        | 0.02     | 1.50      | 0.20          | 6.57          |

Permitted actually 19.9 tpy/day 2.13 actual 9.33

Notes:

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2. Wind Protected describes an extensive but incomplete enclosure of the activity. An abatement factor of 50% has been taken from the literature and on site experience
3. Enclosed by Building describes a more complete enclosure of the activity such that the activity is largely isolated from all weather influences. An abatement factor of 95% has been used.
4. Sealed refers to a condition less complete than normally expected from process equipment. The effectiveness is taken to be less than '1' due to expected, minor leaks.
5. Process Sealed is a more effective degree of enclosure and more nearly approaches an abatement of '1'. A value of 99.5% has been used.
6. Choke Feed describes the condition where the transferred material flows without experiencing a free falling condition that would normally entrain or create a dusting condition. An abatement factor of 80% has been used
7. Enhanced wind protection refers to near complete enclosure of the activity as in but not as complete as full enclosure in a building. A value of 90% has been used.

*SCS Form*

03/01/93

Source Impact Matrix  
 Draft Proposed Control Strategy for Large Industrial Sources  
 Period: 12/27/86  
 Receptor: Simplot Fence Rec # 76

| Plant   | Name                              | 1992<br>PM10<br>lbs/dy | 1992<br>PM10<br>(ug/m3) | Control<br>(%) | 1997<br>PM10<br>(ug/m3) | 1997<br>PM10<br>lbs/dy |       |
|---|-----------------------------------|------------------------|-------------------------|----------------|-------------------------|------------------------|-------|
| Major Industrial<br>Materials Handling<br>Process Fugitives | simp N Gyp Stack                  | 51.6                   | 0.8                     | 0.00           | 0.8                     | 51.6                   |       |
|   | simp S Gyp Stack                  | 51.6                   | 1.1                     | 0.00           | 1.1                     | 51.6                   |       |
|   | simp #400 Phos Acid Plant         | 0.2                    | 0.0                     | 0.00           | 0.0                     | 0.2                    |       |
|   | simp #100 MAP Plant Loading       | 30.5                   | 1.3                     | 0.00           | 1.3                     | 30.5                   |       |
|   | simp #100 MAP Plant               | 30.5                   | 3.8                     | 0.00           | 3.8                     | 30.5                   |       |
|   | simp #200 DAP Plant Loading       | 12.7                   | 0.8                     | 0.00           | 0.8                     | 12.7                   |       |
|   | simp #200 DAP Plant               | 12.7                   | 1.2                     | 0.00           | 1.2                     | 12.7                   |       |
|   | simp Ammo Sulf Loading            | 10.7                   | 0.5                     | 0.00           | 0.5                     | 10.7                   |       |
|   | simp Ammo Sulf Fugs               | 10.7                   | 0.5                     | 0.00           | 0.5                     | 10.7                   |       |
|   | simp TSP Loading                  | 19.9                   | 0.7                     | 0.00           | 0.7                     | 19.9                   |       |
|   | simp TSP Fugs                     | 19.9                   | 1.2                     | 0.00           | 1.2                     | 19.9                   |       |
|   | simp All Roads                    | 37.6                   | 25.5                    | 0.00           | 25.5                    | 37.6                   |       |
|   | Simp Fug Totals                   |                        | 288.5                   | 37.3           |                         | 37.3                   | 288.5 |
|   | Major Industrial<br>Point Sources | fmc Crushed Shale Pile | 1.1                     | 0.0            | 0.00                    | 0.0                    | 1.1   |
| fmc Silca Pile  |                                   | 5.8                    | 0.3                     | 0.00           | 0.3                     | 5.8                    |       |
| fmc Module Piles  |                                   | 4.3                    | 0.1                     | 0.00           | 0.1                     | 4.3                    |       |
| fmc Fines Pile (big)  |                                   | 2.9                    | 0.1                     | 0.00           | 0.1                     | 2.9                    |       |
| fmc Fines Pile (small)                                      |                                   | 2.9                    | 0.1                     | 0.00           | 0.1                     | 2.9                    |       |
| fmc Dump to Slag Pile                                       |                                   | 851.0                  | 2.5                     | 98.70          | 0.0                     | 11.1                   |       |
| fmc Ferrophos pile  |                                   | 4.3                    | 0.0                     | 0.00           | 0.0                     | 4.3                    |       |
| fmc Recycle Mat   |                                   | 43.5                   | 0.5                     | 0.00           | 0.5                     | 43.5                   |       |
| fmc Slag Pit  |                                   | 3210.6                 | 42.1                    | 97.17          | 1.2                     | 90.8                   |       |
| fmc E. Shale Baghouse                                       |                                   | 0.1                    | 0.0                     | 90.00          | 0.0                     | 0.0                    |       |
| fmc M. Shale Baghouse                                       |                                   | 36.9                   | 0.8                     | 90.00          | 0.1                     | 3.7                    |       |
| fmc W. Shale Baghouse                                       |                                   | 0.2                    | 0.0                     | 90.00          | 0.0                     | 0.0                    |       |
| fmc Calc 1 Fugs/50% Process Flow/F                          |                                   | 49.6                   | 1.0                     | 50.00          | 0.5                     | 24.8                   |       |
| fmc Calc 2 Fugs/50% Proc Flow                               |                                   | 49.6                   | 1.1                     | 50.00          | 0.5                     | 24.8                   |       |
| fmc Cooler #1   |                                   | 1.2                    | 0.0                     | 50.00          | 0.0                     | 0.6                    |       |
| fmc Cooler #2   |                                   | 0.9                    | 0.0                     | 50.00          | 0.0                     | 0.5                    |       |
| fmc Dish BH Fugs  |                                   | 110.2                  | 2.7                     | 95.00          | 0.1                     | 5.5                    |       |
| fmc Proportioning Bldg                                      |                                   | 54.1                   | 1.1                     | 90.00          | 0.1                     | 5.4                    |       |
| fmc Module Stockpile BH                                     |                                   | 22.7                   | 0.6                     | 0.00           | 0.6                     | 22.7                   |       |
| fmc Dust Silo BH Fugs                                       |                                   | 50.8                   | 1.0                     | 90.00          | 0.1                     | 5.1                    |       |
| fmc Furns & Burd BH Fugs                                    |                                   | 2241.9                 | 30.3                    | 94.90          | 1.5                     | 114.3                  |       |
| fmc Briquetting Bldg Fugs                                   |                                   | 4.2                    | 0.1                     | 0.00           | 0.1                     | 4.2                    |       |
| fmc Ore Receiving   |                                   | 2.7                    | 0.1                     | 0.00           | 0.1                     | 2.7                    |       |
| fmc Silica Handling   |                                   | 0.7                    | 0.0                     | 0.00           | 0.0                     | 0.7                    |       |
| fmc Coke Fugs & Coke Hand                                   |                                   | 47.6                   | 1.0                     | 85.62          | 0.1                     | 6.8                    |       |
| fmc Phos Dock Fugs  |                                   | 101.1                  | 1.5                     | 80.00          | 0.3                     | 20.2                   |       |
| fmc All Roads   |                                   | 561.4                  | 8.5                     | 73.62          | 2.2                     | 148.1                  |       |
| fmc Stk/Recl & N Shale                                      |                                   | 36.2                   | 1.1                     | 0.00           | 1.1                     | 36.2                   |       |
| fmc Stk/Recl & S Shale                                      | 36.2                              | 1.2                    | 0.00                    | 1.2            | 36.2                    |                        |       |
| fmc Raw Ore Contingency                                     | 7.2                               | 0.1                    | 0.00                    | 0.1            | 7.2                     |                        |       |
| FMC Fug Totals  |                                   | 7542.0                 | 98.0                    |                | 11.4                    | 636.5                  |       |
| Bapco   | BAPCO Fug Totals                  | 2244.8                 | 16.7                    | 71.14          | 4.8                     | 647.7                  |       |
| Process Fugitives Totals                                    |                                   | 10075.2                | 152.1                   |                | 53.5                    | 1572.8                 |       |
| Major Industrial<br>Point Sources                           | fmc East Shale Baghouse           | 0.0                    | 0.0                     | 0.00           | 0.0                     | 0.0                    |       |
|   | fmc Middle Shale Baghouse         | 13.5                   | 0.3                     | 0.00           | 0.3                     | 13.5                   |       |
|   | fmc West Shale Baghouse           | 0.0                    | 0.0                     | 0.00           | 0.0                     | 0.0                    |       |
|   | fmc Calciner 1.1. Stack 1         | 103.3                  | 0.1                     | 0.00           | 0.1                     | 103.3                  |       |
|   | fmc Calciner 1.1. Stack 2         | 103.3                  | 0.1                     | 0.00           | 0.1                     | 103.3                  |       |
|   | fmc Calciner 1.2. Stack 1         | 94.7                   | 0.0                     | 0.00           | 0.0                     | 94.7                   |       |
|   | fmc Calciner 1.2. Stack 2         | 94.7                   | 0.0                     | 0.00           | 0.0                     | 94.7                   |       |
|   | fmc Calciner 2.1. Stack 1         | 86.4                   | 0.0                     | 0.00           | 0.0                     | 86.4                   |       |
|   | fmc Calciner 2.1. Stack 2         | 86.4                   | 0.0                     | 0.00           | 0.0                     | 86.4                   |       |
|   | fmc Calciner 2.2. Stack 1         | 81.7                   | 0.0                     | 0.00           | 0.0                     | 81.7                   |       |

*Checked w/ Harbi Elakadi  
 16hr emissions match,  
 checked w/ Krishna  
 Vaswanathan, modeling  
 approved*

03/01/93

Source Impact Matrix  
 Draft Proposed Control Strategy for Large Industrial Sources  
 Period: 12/27/86  
 Receptor: Simplot Fence Rec # 76

Major Industrial  
 Point Sources

| Plant              | Name                           | 1992<br>PM10<br>lbs/dy | 1992<br>PM10<br>(ug/m3) | Control<br>(%) | 1997<br>PM10<br>(ug/m3) | 1997<br>PM10<br>lbs/dy |
|--------------------|--------------------------------|------------------------|-------------------------|----------------|-------------------------|------------------------|
| fmc                | Calciner 2.2, Stack 2          | 81.7                   | 0.0                     | 0.00           | 0.0                     | 81.7                   |
| fmc                | 1.1 Cooler Split               | 57.9                   | 0.1                     | 0.00           | 0.1                     | 57.9                   |
| fmc                | 1.2 Cooler Split               | 70.8                   | 0.2                     | 0.00           | 0.2                     | 70.8                   |
| fmc                | 2.1 Cooler                     | 39.9                   | 0.0                     | 0.00           | 0.0                     | 39.9                   |
| fmc                | 2.2 Cooler                     | 59.8                   | 0.0                     | 0.00           | 0.0                     | 59.8                   |
| fmc                | Discharge South Baghouse       | 5.8                    | 0.0                     | 0.00           | 0.0                     | 5.8                    |
| fmc                | Discharge North Baghouse       | 5.8                    | 0.0                     | 0.00           | 0.0                     | 5.8                    |
| fmc                | East Module Baghouse           | 56.1                   | 0.5                     | 0.00           | 0.5                     | 56.1                   |
| fmc                | West Module Baghouse           | 42.6                   | 0.4                     | 0.00           | 0.4                     | 42.6                   |
| fmc                | Module Stockpile Baghouse      | 20.2                   | 0.4                     | 0.00           | 0.4                     | 20.2                   |
| fmc                | Dust Silo Baghouse             | 74.1                   | 0.5                     | 0.00           | 0.5                     | 74.1                   |
| fmc                | East Burden Baghouse           | 40.4                   | 0.2                     | 0.00           | 0.2                     | 40.4                   |
| fmc                | West Burden Baghouse           | 31.4                   | 0.1                     | 0.00           | 0.1                     | 31.4                   |
| fmc                | Coke Handling Baghouse         | 38.1                   | 0.3                     | 0.00           | 0.3                     | 38.1                   |
| fmc                | Phos Dock Scrubber             | 21.1                   | 0.1                     | 0.00           | 0.1                     | 21.1                   |
| fmc                | Boiler 2                       | 0.7                    | 0.0                     | 0.00           | 0.0                     | 0.7                    |
| fmc                | Boiler 3                       | 3.2                    | 0.0                     | 0.00           | 0.0                     | 3.2                    |
| fmc                | Boiler 4                       | 3.2                    | 0.0                     | 0.00           | 0.0                     | 3.2                    |
| fmc                | Furn #1 Tap Hood               | 95.0                   | 0.4                     | 0.00           | 0.4                     | 95.0                   |
| fmc                | Furn #2 Tap Hood               | 50.2                   | 0.2                     | 0.00           | 0.2                     | 50.2                   |
| fmc                | Furn #3 Tap Hood               | 66.0                   | 0.3                     | 0.00           | 0.3                     | 66.0                   |
| fmc                | Furn #4 Tap Hood               | 71.3                   | 0.3                     | 0.00           | 0.3                     | 71.3                   |
| fmc                | Furn #1 PRV                    | 3.7                    | 0.0                     | 0.00           | 0.0                     | 3.7                    |
| fmc                | Furn #2 PRV                    | 3.7                    | 0.0                     | 0.00           | 0.0                     | 3.7                    |
| fmc                | Furn #3 PRV                    | 3.7                    | 0.0                     | 0.00           | 0.0                     | 3.7                    |
| fmc                | Furn #4 PRV                    | 3.7                    | 0.0                     | 0.00           | 0.0                     | 3.7                    |
| fmc                | Furn #1 CO Flare               | 8.6                    | 0.0                     | 0.00           | 0.0                     | 8.6                    |
| fmc                | Furn #2 CO Flare               | 7.3                    | 0.0                     | 0.00           | 0.0                     | 7.3                    |
| fmc                | Furn #3 CO Flare               | 4.4                    | 0.0                     | 0.00           | 0.0                     | 4.4                    |
| fmc                | Furn #4 CO Flare               | 10.5                   | 0.0                     | 0.00           | 0.0                     | 10.5                   |
| fmc                | Sec Cond Flare                 | 23.7                   | 0.1                     | 0.00           | 0.1                     | 23.7                   |
| fmc                | CO Flare Pit                   | 17.1                   | 0.0                     | 0.00           | 0.0                     | 17.1                   |
| fmc                | New furnace bldg scrubber      | 0.0                    | 0.0                     | 0.00           | 0.2                     | 37.2                   |
| FMC Point Totals   |                                | 1685.7                 | 4.9                     |                | 5.1                     | 1723.0                 |
| simplot            | #400 Phos Acid D-M Scrubb      | 16.1                   | 1.5                     | 0.00           | 1.5                     | 16.1                   |
| simplot            | MAP Reac/Gran Vent Scrubb      | 69.9                   | 0.5                     | 0.00           | 0.5                     | 69.9                   |
| simplot            | #100 Ammo Phos Baghouse        | 61.8                   | 1.0                     | 0.00           | 1.0                     | 61.8                   |
| simplot            | MAP Dryer Vent Scrubb #2       | 336.7                  | 1.4                     | 0.00           | 1.4                     | 336.7                  |
| simplot            | DAP Reac/Gran Vent Scrubb      | 252.9                  | 0.0                     | 0.00           | 0.0                     | 252.9                  |
| simplot            | Dap Cooler Baghouse            | 180.7                  | 31.1                    | 0.00           | 31.1                    | 180.7                  |
| simplot            | TSP Dryer Baghouse             | 205.9                  | 0.2                     | 0.00           | 0.2                     | 205.9                  |
| simplot            | Ammo Sulf Reac/Dry Vent Scrubb | 20.0                   | 0.3                     | 0.00           | 0.3                     | 20.0                   |
| simplot            | Ammo Sulf Cooler Cyclone       | 78.5                   | 1.6                     | 0.00           | 1.6                     | 78.5                   |
| simplot            | CE Boiler                      | 5.4                    | 0.3                     | 0.00           | 0.3                     | 5.4                    |
| simplot            | Keeler Boiler                  | 10.8                   | 0.3                     | 0.00           | 0.3                     | 10.8                   |
| simplot            | Fos-wheel Boiler               | 10.8                   | 0.3                     | 0.00           | 0.3                     | 10.8                   |
| simplot            | Cooling Tower, North           | 169.4                  | 0.0                     | 0.00           | 0.0                     | 169.4                  |
| simplot            | Cooling Tower, East            | 254.4                  | 0.0                     | 0.00           | 0.0                     | 254.4                  |
| simplot            | Cooling Tower, West            | 254.4                  | 0.0                     | 0.00           | 0.0                     | 254.4                  |
| Simp Point Totals  |                                | 1927.7                 | 38.4                    |                | 38.4                    | 1927.7                 |
| BAPCo              | Coke Dryer Scrubber            | 0.9                    | 0.0                     | 0.00           | 0.0                     | 0.9                    |
| BAPCo              | Coke Dryer Baghouse            | 0.2                    | 0.0                     | 0.00           | 0.0                     | 0.2                    |
| BAPCo              | Drum Mixer Baghouse            | 21.9                   | 0.0                     | 0.00           | 0.0                     | 21.9                   |
| BAPCo              | New Slag Handling Baghouse     | 0.0                    | 0.0                     | 0.00           | 0.0                     | 0.0                    |
| BAPCo Point Totals |                                | 22.9                   | 0.0                     |                | 0.0                     | 22.9                   |
| Point Totals       |                                | 3636.3                 | 43.3                    |                | 43.5                    | 3673.5                 |

03/01/93

Source Impact Matrix  
 Draft Proposed Control Strategy for Large Industrial Sources  
 Period: 12/27/86  
 Receptor: Simplot Fence Rec # 76

|   | 1992<br>PM10<br>lbs/dy | 1992<br>PM10<br>(ug/m3) | Control<br>(%) | 1997<br>PM10<br>(ug/m3) | 1997<br>PM10<br>lbs/dy |
|---|------------------------|-------------------------|----------------|-------------------------|------------------------|
| Regional Area Sources   |                        |                         |                |                         |                        |
| Resid & Comm Heat, Road<br>Dust, Small Industry, &<br>Mobile Sources - AREA 1 | *                      | *                       | *              | 19.7                    | *                      |
| Agriculture, Pres Burn,<br>Fires, Construction - AREA 2                       | *                      | *                       | *              | 1.9                     | *                      |
| Regional Background   |                        | 10.0                    |                | 10.0                    |                        |
| Regional Area Totals  |                        | 10.0                    |                | 31.5                    |                        |
| Matrix Grand Total  | 13711.6                | 205.4                   |                | 128.5                   | 5246.3                 |

\* = This information not available

Totals Tables:

|            | 1992<br>ppd<br>Emission | 1997<br>ppd<br>Emission | Total<br>ppd<br>Reduction | %<br>ppd<br>Change |
|------------|-------------------------|-------------------------|---------------------------|--------------------|
| FMC        | 9227.7                  | 2359.5                  | 6868.2                    | 74.4               |
| BAPCO      | 2267.7                  | 670.7                   | 1597.0                    | 70.4               |
| JRS        | 2216.2                  | 2216.2                  | 0.0                       | 0.0                |
| Area 1     |                         |                         |                           |                    |
| Area 2     |                         |                         |                           |                    |
| Background |                         |                         |                           |                    |
| Total:     | 13711.6                 | 5246.3                  | 8465.3                    | 61.7               |

  

|            | 1992<br>ug/m3<br>Impact | 1997<br>ug/m3<br>Impact | Total<br>ug/m3<br>Reduction | %<br>ug/m3<br>Change |
|------------|-------------------------|-------------------------|-----------------------------|----------------------|
| FMC        | 102.9                   | 16.4                    | 86.5                        | 84.0                 |
| BAPCO      | 16.7                    | 4.8                     | 11.9                        | 71.1                 |
| JRS        | 75.7                    | 75.7                    | 0.0                         | 0.0                  |
| Area 1     |                         |                         |                             |                      |
| Area 2     |                         |                         |                             |                      |
| Background | 10                      | 10                      | 0.0                         | 0.0                  |
| Total:     | 205.4                   | 107.0                   | 98.4                        | 47.9                 |

Reduction Selection Table

ug/m3 Reduction Determinations, using sources > 20 ug/m3

|                          |             |             |               |                  |            |
|--------------------------|-------------|-------------|---------------|------------------|------------|
| Total impact=            | 205.4       |             |               |                  |            |
| Amount needed to reduce= | 55.4        |             |               |                  |            |
|                          |             | adjusted    |               |                  |            |
|                          | Plant Total | Plant Total | initial fract | Reduction Needed | ug/m3 Goal |
| FMC                      | 102.9       | 82.9        | 0.598         | 33.1             | 69.8       |
| BAPCO                    | 16.7        | 0.0         | 0.000         | 0.0              | 16.7       |
| JRS                      | 75.7        | 55.7        | 0.402         | 22.2             | 53.4       |
| Area 1                   |             |             |               |                  |            |
| Area 2                   |             |             |               |                  |            |
| Background               | 10          | 0           | 0.000         | 0.0              | 10.0       |
| Totals                   | 205.4       | 138.6       | 1.000         | 55.4             | 150.0      |