February 13, 1998

MEMORANDUM

TO: Orville D. Green, Assistant Administrator
   Air and Hazardous Waste

FROM: Susan J. Richards, Chief
   Air Quality Permitting Bureau

SUBJECT: P-970132, General Mills Operations, Inc., Pocatello
         (Grain Conditioning Facility, Permit to Construct #005-00013)

PROJECT DESCRIPTION

General Mills Operations, Inc. (General Mills) plans to construct a new grain conditioning facility at their plant in Pocatello, Idaho. In addition, reclaim equipment will be installed to recover grain products. This facility will utilize wheat stored in the existing grain elevator.

DISCUSSION

On December 31, 1997, the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) received a Permit to Construct (PTC) application from General Mills Operations, Inc. (General Mills) for the construction and operation of the grain processing facility in Pocatello, Idaho. The project includes the installation of grain conditioning and reclaim equipment, as well particulate emission control equipment.

FEES

This facility is not a major facility as defined in IDAPA 16.01.01.008.14. Therefore, registration and registration fees, in accordance with IDAPA 16.01.01.526, are not applicable.

RECOMMENDATION

Based on review of application materials and state and federal rules and regulations, staff recommend that General Mills be issued a PTC for this new equipment. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD PTC requirements.

SJR/GEF/ms ...

cc: P. Rayne/AFS
    R. Wilkosz/TSB
    Pocatello RO
    Source File (005-00013)
    COF
February 13, 1998

MEMORANDUM

TO: Susan J. Richards, Chief
   Air Quality Permitting Bureau

FROM: George E. Fink, P.E., Air Quality Engineer
       New Source Review Section

SUBJECT: Permit to Construct Technical Analysis
         P-970132, General Mills Operations Inc., Pocatello
         (Grain Conditioning Facility)

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 (PTC).

PROJECT DESCRIPTION

The General Mills Operations, Inc. (General Mills) has submitted a PTC application to construct and operate a new grain conditioning facility which will process wheat stored in the existing grain elevator.

SUMMARY OF EVENTS

On December 31, 1997, the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ), received a PTC application from General Mills to construct a grain conditioning facility at their Pocatello site. Grain will be transferred from the existing grain elevator.

DISCUSSION

1. Facility Process Description

   The proposed grain conditioning facility will process (clean) wheat stored in the adjacent grain elevator. The equipment to be installed includes: aspirators; screens; storage bins; elevators; conveying systems; and receiving, storage, and loadout equipment. A ventilation system with filters will be used to control particulate emissions from the grain cleaning process equipment.

   Also, a reclaim leg will be installed to recover oversized materials from a new pre-cleaner. Emissions from this equipment will be controlled by a new ventilation system and baghouse.

2. Equipment Information

   Listed below are major process equipment and emission sources for the grain conditioning facility and reclaim equipment.
2.1 Location:
Maximum Design Capacity: Grain Conditioning Facility
Equipment: 1,000 bushels/hour
M208 Separator Aspirator
Quad Stacked Indent Cylinders
Destoner
Horizontal Scourer
Buhler Tempering System
Universal Legs L-2, L-3 & L-4
Fuel Type: N/A
Maximum Heat Input: N/A
Control Device: Baghouse filter
Stack Height: LMC West Model 144 FSD-12
Stack Diameter: 99.97% control efficiency
Exit Volume: 8.0 ft. (110 ft. above grade)
Exit Gas Temp: 32 inches
24,000 acfm
Ambient

2.2 Location:
Maximum Design Capacity: Reclaim Facility
Equipment: 1,800 bushels/yr
S206 Carter Day Aspirator
Reclaim Leg
Reclaim Bin
Universal Leg 0
Fuel Type: N/A
Maximum Heat Input: N/A
Control Device: Baghouse filter
Stack Height: LMC West Model 144 FSD-12
Stack Diameter: 99.97% control efficiency
Exit Volume: 8.0 ft. (110 ft. above grade)
Exit Gas Temp: 32 inches
28,500 acfm
Ambient

As part of this proposed project, General Mills plans to install a new particulate emission control system for the reclaim process. This ventilation/emission control system will also be used to control particulate emissions from selected grain elevator equipment. No other modifications to the grain elevator are planned at this time. No combustion equipment has been proposed to be included in the process at this time.

3. Area Classification

General Mill's grain conditioning facilities will be located in Pocatello, Idaho. Pocatello is located in Bannock County which is part of Air Quality Control Region 61, which is designated as a non-attainment for PM-10.
4. **Facility Classification**

This facility is not a designated facility as defined in IDAPA 16.01.01.006.25. This facility is not a major facility as defined in IDAPA 16.01.01.006.54 and as defined in IDAPA 16.01.01.008.14. The grain conditioning facility is not subject to New Source Performance Standards (NSPS). However, the adjacent grain elevator which is currently grandfathered, if modified, is potentially subject to the standards contained in 40 CFR 60.300 (Subpart DD-Standards of Performance for Grain Elevators). The facility's Standard Industrial Classification (SIC) Codes are 5153 for the grain elevator and 2041 for the grain conditioning facility.

The AIRS Facility Subsystem source/pollutant classification for this facility is A2 because actual emissions are less than 100 tons per year (T/yr), but potential uncontrolled emissions could exceed 100 T/yr.

5. **Emission Estimates**

Air emissions estimates (PTE) from the new grain conditioning were calculated based on process data provided by General Mills and AP-42 emission factors. PM-10 (particulate matter) is the primary air pollutant generated by the processing of grains. General Mills has submitted maximum operating rates of 1,000 bushels per hour for the grain conditioning process and 1,800 bushels per hour for the aspirator on the reclaim process.

All point sources of emissions in the grain conditioning process sources will be controlled using a central ventilation/baghouse system. These particulate filters has a vendor guarantee of 99.97% control efficiency. Further, vendor calculations are based on proposed maximum grain loading of 7 grains per cfm and flow rates of 28,500 acfm and 24,000 acfm for the reclaim/grain elevator (System 3) and grain conditioning system (System 1), respectively. Based on these assumptions, the emissions from the baghouse filter stacks are 0.513 pounds per hour and 0.432 pounds per hour for the reclaim and grain conditioning systems, respectively.

However, in order to allow more operating flexibility, the permit allowable emission calculations were based on operating rates of 1,200 bushels per hour and 2,000 bushels per hour for the grain conditioning and reclaim processes, respectively. In addition, the filter control efficiency for each ventilation/emission control system was set at 99.9%. The calculated emission rates are given in Table 1.

There are also fugitive emissions associated with the loading of reclaim materials and conditioned grain into trucks and rail cars. The reclaim truck loadout and railcar loadout systems are new. These emissions are also summarized in Table 1.
The annual emission calculations are based on facility operations of 8,760 hours per year. All emission calculations are located in Appendix A of this memo. The uncontrolled potential to emit from this facility is more than 100 T/yr.

Table 1
Permit Allowable Emission Summary: Particulates (PM-10)
(Controlled - 8,760 hours/year)

<table>
<thead>
<tr>
<th>No.</th>
<th>SOURCE DESCRIPTION</th>
<th>PM-10 (lb/hr)</th>
<th>PM-10 (T/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reclaim System</td>
<td>System 3 - Grain Elevator/Reclaim System Filter Stack (Reclaim process sources: Carter Day Aspirator, Reclaim Leg/Bin)</td>
<td>1.710</td>
<td>7.470</td>
</tr>
<tr>
<td>F-1</td>
<td>Truck Loadout (grain)</td>
<td>0.108</td>
<td>0.470</td>
</tr>
<tr>
<td>F-2</td>
<td>Railcar Loadout (grain)</td>
<td>0.108</td>
<td>0.470</td>
</tr>
<tr>
<td>F-3</td>
<td>Dust Bin</td>
<td>0.025</td>
<td>0.110</td>
</tr>
<tr>
<td>F-4</td>
<td>Truck Loadout (dust)</td>
<td>0.015</td>
<td>0.070</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>3.410</strong></td>
<td><strong>14.880</strong></td>
</tr>
</tbody>
</table>

6. **Modeling**

Conservative modeling of PM-10 emissions from point sources was conducted using EPA-approved SCREEN3 computer-run model. The point sources modeled include the following: reclaim/elevator process ventilation system filter stack (EP-1) and grain conditioning process ventilation system filter stack (EP-2). The other sources are assumed to be negligible sources. The maximum PM-10 impacted from all point sources, using the proposed permit emission limits, are summarized below.
Table 2
Modeled Ambient Concentrations Summary: Particulates (PM-10)

<table>
<thead>
<tr>
<th>Emission Point No.</th>
<th>Description</th>
<th>24-hour Ambient Conc. (µg/m³)</th>
<th>Annual Ambient Conc. (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-1</td>
<td>System 3 - Reclaim/Elevator Ventilation System Filter Stack</td>
<td>2.97</td>
<td>0.594</td>
</tr>
<tr>
<td>EP-2</td>
<td>System 1 - Grain Conditioning Ventilation System Filter Stack</td>
<td>2.69</td>
<td>0.538</td>
</tr>
</tbody>
</table>

Both of these values are below the non-attainment significant concentrations of 5.0 µg/m³ 24-hour and 1.0 µg/m³ annual.

7. Regulatory Review

7.1 PTC Applicability Review

A PTC is required because General Mills proposes to construct a stationary source in Pocatello, Idaho. This new facility, before state enforceable permit limits, has an uncontrolled PTE greater than 100 T/hr for PM. The facility is located in a non-attainment area and has the potential to exceed the non-attainment significant concentrations levels.

7.2 Federal Regulatory Review

A review of 40 CFR 60.300 (Subpart DD-Standards of Performance for Grain Elevators) has been conducted and it has been determined that the grain conditioning and reclaim equipment at this facility are not subject to these requirements.

7.3 Permitting Requirements Review

7.3.1 Emission Limits

The only pollutant required to be regulated at this new plant has been determined to be PM-10. The PTC will limit point source PM-10 emissions to a total of 75.6 pounds per day and 13.8 T/hr. Individual point sources (EP-1 and EP-2) have the emission limits stated in Table 1.

7.3.2 Operating Requirements

The facility PM-10 PTE is based primarily on the filter grain loading factors provided by the vendor which are not a function of throughput. However, since the design of the filters and subsequent grain loading guarantee
includes the air and product flow rates, the throughput is inherently limited by this design. In the permit, the control efficiency is set at a minimum of 99.9% and the operating rates are set at 1,200 bushels per hour and 2,000 bushels per hour for the grain conditioning and reclaim, respectively.

This facility will be involved in the receiving, loadout, handling, and processing of grains and is expected to have some fugitive emissions. Therefore, the facility will be required, when practical and reasonable, to control these fugitives in accordance with Idaho Rules. The facility will also be limited in visible emissions, emanating from activities from this facility, not leaving the property boundary for more than three (3) minutes in any 60-minute period.

An Operation and Maintenance Manual will be required for the air pollution control equipment (filters) which describes the methods and procedures to be followed for proper operations (i.e., pressure drop, inspection frequencies, etc.).

In summary, this facility is subject to the following new source review requirements:

- **IDAPA 16.01.01.201**
  - Permit to Construct Required;
  - Application Procedures;

- **IDAPA 16.01.01.202**
  - Permit Requirements for New and Modified Stationary Sources;

- **IDAPA 16.01.01.203**
  - Procedures for Issuing Permits;

- **IDAPA 16.01.01.209**
  - Conditions for Permits;

- **IDAPA 16.01.01.211**
  - Obligation to Comply;

- **IDAPA 16.01.01.212**
  - Air Quality Standards and Area Classification;

- **IDAPA 16.01.01.575**
  - Visible Emissions;

- **IDAPA 16.01.01.625**
  - Rules for the Control of Fugitive dust; and

- **IDAPA 16.01.01.650**
  - Standards of Performance for Grain Elevators.

- **40 CFR 60 Subpart DD**
8. **Compliance Assurance Bureau Review**

A draft copy of the PTC was presented to the Compliance Assurance Bureau for review and comment before final PTC issuance.

9. **AIRS Information**

The emission units identified in this document are added to the AIRS database as shown in Appendix C of this document.

**FEES**

This facility is not a major facility as defined in IDAPA 16.01.01.008.14. Therefore, registration and registration fees, in accordance with IDAPA 16.01.01.526, are not applicable.

**RECOMMENDATIONS**

Based on review of application material and state and federal rules and regulations, staff recommend that General Mills be issued a PTC for the new grain conditioning and reclaim equipment. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD Permit to Construct requirements.

GEF/ms

---

cc: P. Rayne/AFS
    R. Wilkosz/TSB
    Pocatello Regional Office
    Source File (005-00013)
    COF
APPENDIX A

EMISSION ESTIMATES
**Estimated Maximum Actual Emissions**

| Description                          | Emission Point No. | Feed Rate (ton/hr) | Emission Factor (lb/ton) | Uncntrl. PTE PM-10 (ton/yr) | Uncntrl. PTE PM-10 (ton/yr) | Filter Control Eff. 95.97% | PM-10 (lb/hr) | PM-10 (ton/yr) | PM-10 (lb/hr) | PM-10 (ton/yr) | PM-10 (lb/hr) | PM-10 (ton/yr) | Dispersion Factor (ug/m3 per lb/hr) | Est. Ambient Concent. | AAQS - Non-Attain. |
|--------------------------------------|--------------------|--------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------------|---------------------|-------------------|
| Carter Day Aspirator AK-5            | EP-1a              | 54.00              | 0.08                      | 4.32                        | 18.92                       | 99.97%                       | 0.00130        | 0.000668       | N/A            | 0.00056        | N/A            | 0.00000        | 2.24                        | 4.34                | 0.00E+00          | 5                  |
| Reclaim Leg/Bin                      | EP-1b              | 15.00              | 0.08                      | 1.20                        | 5.26                        | 99.97%                       | 0.00036        | 0.000158       | N/A            | 0.00000        | N/A            | 0.00000        | 8.91E-01                    | 1.78E-01            | 0.00E+00          | 5                  |
| Reclaim/Elevator Dust Filter         | EP-1               | 0.00               | 0.08                      | 0.00                        | 0.00                        | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 3.52                        | 24.18               | 0.00E+00          | 5                  |
| Universal Leg L-1/Surge Bin          | EP-2a              | 30.00              | 0.08                      | 2.40                        | 10.51                       | 99.97%                       | 0.00004        | 0.000004       | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Separator/Aspirator M-208            | EP-2b              | 30.00              | 0.08                      | 2.40                        | 10.51                       | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Bin hopper                           | EP-2c              | 30.00              | 0.005                     | 0.15                        | 0.66                        | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Quad Stacked Indent Cylinders        | EP-2d              | 30.00              | 0.005                     | 0.15                        | 0.66                        | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Bin hopper                           | EP-2e              | 30.00              | 0.08                      | 2.40                        | 10.51                       | 99.97%                       | 0.00004        | 0.00004        | N/A            | 0.00004        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Destoner                             | EP-2f              | 30.00              | 0.08                      | 2.40                        | 10.51                       | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Universal Leg L-2/Horizontal Scourer  | EP-2g              | 30.00              | 0.005                     | 0.15                        | 0.66                        | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Universal Leg L-3/Buhler Tempering   | EP-2h              | 30.00              | 0.005                     | 0.15                        | 0.66                        | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Bin Loading (2-3,500 bu each)        | EP-2i              | 30.00              | 0.08                      | 2.40                        | 10.51                       | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Universal Leg L-4/Surge Bin/Bagger   | EP-2j              | 30.00              | 0.08                      | 2.40                        | 10.51                       | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Grain Conditioning Dust Filter        | EP-2               | 0.00               | 0.08                      | 0.00                        | 0.00                        | 99.97%                       | 0.00000        | 0.00000        | N/A            | 0.00000        | N/A            | 0.00000        | 1.19                        | 1.19                | 0.00E+00          | 5                  |
| Truck Loadout                         | F-1                | 30.00              | 0.08                      | 0.06                        | 0.39                        | 0.000%                      | 0.00000        | 0.3920         | 0.000%         | 0.00000        | 0.3920         | 0.00000        | 0.00000          | 0.00000              | 0.00E+00            | 5                  |
| New Rail Loadout                      | F-2                | 30.00              | 0.08                      | 0.06                        | 0.39                        | 0.000%                      | 0.00000        | 0.3920         | 0.000%         | 0.00000        | 0.3920         | 0.00000        | 0.00000          | 0.00000              | 0.00E+00            | 5                  |
| Dust Bin                              | F-3                | 1.00               | 0.005                     | 0.01                        | 0.02                        | 0.000%                      | 0.00000        | 0.0200         | 0.000%         | 0.00000        | 0.0200         | 0.00000        | 0.00000          | 0.00000              | 0.00E+00            | 5                  |
| Truck Loadout                         | F-4                | 1.00               | 0.003                     | 0.00                        | 0.01                        | 0.002%                      | 0.00000        | 0.01314        | 0.002%         | 0.00000        | 0.01314        | 0.00000        | 0.00000          | 0.00000              | 0.00E+00            | 5                  |

NA* – Particulates from this piece of equipment are captured by a ventilation system and discharged via the noted dust filter stack.
| Description                                      | Calculated PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 | Controlled PM-10 |
|--------------------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Train Loadout (Axial Fan)                        |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| New Rail Loadout                                 |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Dust Bin                                        |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Tractor Loadout                                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Cumulative Emission                            |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Emission Factor                                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| TPA-10 PM-10                                     |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Emission Factor                                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
APPENDIX B

MODELING IMPACT ANALYSES
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

P-970132 General Mills Operations, Pocatello: Reclalm/Elevator System

SIMPLE TERRAIN INPUTS:
SOURCE TYPE = POINT
EMISSION RATE (G/S) = .126000
STACK HEIGHT (M) = 33.5000
STK INSIDE DIAM (M) = .8128
STK EXIT VELOCITY (M/S) = 25.2861
STK GAS EXIT TEMP (K) = 295.0000
AMBIENT AIR TEMP (K) = 293.0000
RECEPTOR HEIGHT (M) = 1.5000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = .0000
MIN HORIZ BLDG DIM (M) = .0000
MAX HORIZ BLDG DIM (M) = .0000

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 27800.000 (ACFM)

BUOY. FLUX = .278 M**4/S**3; MOM. FLUX = 104.885 M**4/S**2.

*** FULL METEOROLOGY ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

<table>
<thead>
<tr>
<th>DIST (M)</th>
<th>CONC</th>
<th>U10M (UG/M**3)</th>
<th>USTK MIX HT (M)</th>
<th>PLUME HT (M)</th>
<th>SIGMA Y (M)</th>
<th>SIGMA Z (M)</th>
<th>DWASH</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.</td>
<td>.8799E-01</td>
<td>2 5.0</td>
<td>6.0 1600.0</td>
<td>43.79</td>
<td>16.11</td>
<td>12.64</td>
<td>NO</td>
</tr>
<tr>
<td>100.</td>
<td>1.997</td>
<td>2 3.5</td>
<td>4.2 1120.0</td>
<td>48.19</td>
<td>31.66</td>
<td>25.52</td>
<td>NO</td>
</tr>
<tr>
<td>200.</td>
<td>3.294</td>
<td>3 2.0</td>
<td>2.5 640.0</td>
<td>57.71</td>
<td>42.90</td>
<td>40.59</td>
<td>NO</td>
</tr>
<tr>
<td>300.</td>
<td>3.306</td>
<td>3 1.0</td>
<td>1.3 320.0</td>
<td>81.91</td>
<td>63.88</td>
<td>61.57</td>
<td>NO</td>
</tr>
<tr>
<td>400.</td>
<td>3.285</td>
<td>6 1.0</td>
<td>1.4 10000.0</td>
<td>52.81</td>
<td>41.22</td>
<td>25.89</td>
<td>NO</td>
</tr>
<tr>
<td>500.</td>
<td>4.118</td>
<td>6 1.0</td>
<td>1.4 10000.0</td>
<td>52.81</td>
<td>50.51</td>
<td>30.74</td>
<td>NO</td>
</tr>
</tbody>
</table>

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 50. M: 606. 4.337 6 1.0 1.4 10000.0 52.81 60.15 35.56 NO

DWASH = MEANS NO CALC MADE (CONC = 0.0)
DWASH = NO MEANS NO BUILDING DOWNWASH USED

******************************************************
*** SUMMARY OF SCREEN MODEL RESULTS ***
******************************************************

CALCULATION MAX CONC DIST TO TERRAIN
PROCEDURE (UG/M**3) MAX (M) HT (M)

| SIMPLE TERRAIN | 4.337 | 606. | 0. |
**SCREEN3 MODEL RUN**
**VERSION DATED 95250**

P-970132 General Mills Operations, Pocatello: Grain Conditioning Facility

**SIMPLE TERRAIN INPUTS:**

SOURCE TYPE = POINT  
EMISSION RATE (G/S) = .126000  
STACK HEIGHT (M) = 33.5000  
STK INSIDE DIAM (M) = .8128  
STK EXIT VELOCITY (M/S) = 21.8297  
STK GAS EXIT TEMP (K) = 295.0000  
AMBIENT AIR TEMP (K) = 293.0000  
RECEPTOR HEIGHT (M) = 1.5000  
URBAN/RURAL OPTION = URBAN  
BUILDING HEIGHT (M) = .0000  
MIN HORIZ BLDG DIM (M) = .0000  
MAX HORIZ BLDG DIM (M) = .0000

STACK EXIT VELOCITY WAS CALCULATED FROM  
VOLUME FLOW RATE = 24000.000 (ACFM)

BUOY. FLUX = .240 M**4/S**3; MOM. FLUX = 78.171 M**4/S**2.

**FULL METEOROLOGY**

**TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES**

<table>
<thead>
<tr>
<th>DIST (M)</th>
<th>CONC</th>
<th>U10M</th>
<th>USTK MIX HT</th>
<th>PLUME SIGMA</th>
<th>SIGMA HT (M)</th>
<th>Y (M)</th>
<th>Z (M)</th>
<th>DWASH</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.</td>
<td>.198</td>
<td>2</td>
<td>5.0 6.0 1600.0</td>
<td>42.38</td>
<td>16.04</td>
<td>12.56</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>100.</td>
<td>2.313</td>
<td>1</td>
<td>3.0 3.6 960.0</td>
<td>48.30</td>
<td>31.66</td>
<td>25.52</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>200.</td>
<td>3.856</td>
<td>3</td>
<td>1.5 1.9 480.0</td>
<td>61.36</td>
<td>43.08</td>
<td>40.78</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>300.</td>
<td>3.802</td>
<td>3</td>
<td>1.0 1.3 320.0</td>
<td>75.30</td>
<td>63.50</td>
<td>61.18</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>400.</td>
<td>3.737</td>
<td>6</td>
<td>1.0 1.4 10000.0</td>
<td>51.00</td>
<td>41.16</td>
<td>25.79</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>500.</td>
<td>4.528</td>
<td>6</td>
<td>1.0 1.4 10000.0</td>
<td>51.00</td>
<td>50.46</td>
<td>30.65</td>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 50. M:  
581. 4.673 6 1.0 1.4 10000.0 | 51.00 | 57.88 | 34.39 | NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)  
DWASH=NO MEANS NO BUILDING DOWNWASH USED

*************
**SUMMARY OF SCREEN MODEL RESULTS**
*************

**CALCULATION**  MAX CONC  DIST TO TERRAIN  
**PROCEDURE**  (UG/M**3**3)  MAX (M)  HT (M)

**SIMPLE TERRAIN**  4.673 581. 0.