ELECTRONIC COPIES OF THE MODELING FILES

Electronic copies of all input, output, and support modeling files necessary to duplicate the model results are provided and accompany this submission. Those files include:

- HOKU 0308_97_pp.ext, where
  pp = the pollutant ID as in Table 1, and
  ext = .DAT for AERMOD input files, .LST for AERMOD model output files
- HOKU.MAP and HOKU.MOU AERMAP input and output files
- The IDEQ provided SITE1_97.PFL and SFC AERMET meteorological data files
- BPIP files Hoku0308.*

IDEQ MI FORMS

The information required on the IDEQ MI forms is included in the following places:

- Model source data is in Table 1, and on the Model Source Data spreadsheet included in the zipped electronic files
- Building data is included in Appendix A, and in the five BPIP-Prime files included in the electronic data submission, including BPIP input and output files
- Model results are included in Table 2

All that information is also included in the BEEST modeling file, and/or the model input and output files included in electronic form.

Appendix A

BPIP-Prime Model Input and Output Data Summary‘

```
'C:\JBR\Hoku\Hoku 0308.BST BEESTWin BPIP-Prime Files 3/29/2008
6:33:27'AM\''P'\''METER''      1.0\''UTMY'        0
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'ELEVHDHS'      1            1353.
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378498         4750105.2
378486.9       4750112.6
378482.7       4750106.7
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378506.2       4750060
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378549.4       4750061.4
378520.1       4750081.9
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378472.9       4750082.2
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378490         4750062.1
378487.1       4750057.1
378470         4750068
378473.4       4750073.4
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 25            4.88
378427         4750055.2
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378449.8       4750053.8
378443.5       4750044.3
'MLTHOUSE'      1            1353.
 25            25.30
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378521.2       4749981
378445.3       4750030.2
378470         4750068
```

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378595.8       4750000
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378595.7       4749992.2
378587         4749976.5
378575.7       4749983.3
378579.2       4749989.3
'ADMIN'         1            1349.92
 25            22.86
378018         4749969.7
378028         4749988.9
378064         4749973
378055.3       4749951.1
'POSTPROC'      1            1351.94

 25            3.6576
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378000.7       4750030.9
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377908         4750139.6
'COOLTWR'       1            1353.18
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377572.6       4750513
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'DMWATER'       1            1352.24
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378105.7       4750008.5
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378125.7       4750000.5
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378125         4750060
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378135         4750062
378133         4750056
'LAB'           1            1350.43
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377478          4750534.5
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378048          4750046
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377949.47       4750034.33
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377944.68       4750038.26
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377934.67      4750019.53
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377938.52      4750017.94
377940.6       4750017.73
377942.68      4750017.94
377944.68      4750018.54
377946.53      4750019.53
377948.14      4750020.86
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377950.46      4750024.32
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377451.69      4750600.98
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377449.31      4750600.98
377448.17      4750600.63
377447.11      4750600.07
377446.19      4750599.31
377445.43      4750598.39
377444.87      4750597.33
377444.52      4750596.19
377444.4       4750595.
377444.52      4750593.81
377444.87      4750592.67
377445.43      4750591.61
377446.19      4750590.69
377447.11      4750589.93
377448.17      4750589.37
377449.31      4750589.02
377450.5       4750588.9
377451.69      4750589.02
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377453.89      4750589.93
377454.81      4750590.69
377455.57      4750591.61
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377622.7       4750467.49
377622.42      4750467.41
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377621.92      4750467.08
377621.73      4750466.85
377621.59      4750466.58
377621.51      4750466.3
377621.48      4750466.
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377621.73      4750465.15
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377622.15      4750464.73
377622.42      4750464.59
377622.7       4750464.51
377623.        4750464.48
377623.3       4750464.51
377623.58      4750464.59
377623.85      4750464.73
377624.08      4750464.92
377624.27      4750465.15
377624.41      4750465.42
377624.49      4750465.7
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377641.4       4750453.92
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377639.99      4750452.98
377639.91      4750452.7
377639.88      4750452.4
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377640.55      4750451.13
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377659.22       4750440.21
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377658.39       4750439.38
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377658.39       4750438.22
377658.53       4750437.95
377658.72       4750437.72
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377659.5        4750437.31
377659.8        4750437.28
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377660.38       4750437.39
377660.65       4750437.53
377660.88       4750437.72
377661.07       4750437.95
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377679.47       4750426.05
377679.28       4750426.28
377679.05       4750426.47
377678.78       4750426.61
377678.5        4750426.69
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377676.93      4750424.35
377677.12      4750424.12
377677.35      4750423.93
377677.62      4750423.79
377677.9       4750423.71
377678.2       4750423.68
377678.5       4750423.71
377678.78      4750423.79
377679.05      4750423.93
377679.28      4750424.12
377679.47      4750424.35
377679.61      4750424.62
377679.69      4750424.9
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377697.18      4750413.01
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377695.33      4750412.45
377695.19      4750412.18
377695.11      4750411.9
377695.08      4750411.6
377695.11      4750411.3
377695.19      4750411.02
377695.33      4750410.75
377695.52      4750410.52
377695.75      4750410.33
377696.02      4750410.19
377696.3       4750410.11
377696.6       4750410.08
377696.9       4750410.11
377697.18      4750410.19
377697.45      4750410.33
377697.68      4750410.52
377697.87      4750410.75
377698.01      4750411.02
377698.09      4750411.3
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 25            4.572
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377715.        4750399.52
377714.7       4750399.49
377714.42      4750399.41
377714.15      4750399.27
377713.92      4750399.08
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377713.59      4750398.58
377713.51      4750398.3
377713.48      4750398.
377713.51      4750397.7
377713.59      4750397.42
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377714.42      4750396.59
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377715.3       4750396.51
377715.58      4750396.59
377715.85      4750396.73
377716.08      4750396.92
377716.27      4750397.15
377716.41      4750397.42
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'BH1     '     1353          7.32          378487.       4750062.

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'BS1     '     1353          34.14         378535.       4750011.
'BS2     '     1353          10.36         378472.5      4750067.
'BOILER  '     1353.59       6.096         377688.       4750349.
'HOH     '     1353.33       6.096         377679.       4750356.
'EMG     '     1352.37       7.9248        377521.       4750503.
'FP      '     1353          6.096         378118.       4750038.
'COOL1   '     1354.1        9.144         377558.5      4750476.
'COOL2   '     1354.52       9.144         377566.       4750487.5
'COOL3   '     1354.33       9.144         377574.       4750500.
'SBV     '     1350.7        7.3152        377463.       4750554.
'SPFH    '     1349.69       19.812        377460.       4750520.8
'SSFH    '     1349.97       18.288        377470.       4750519.
'LIME    '     1353          6.096         378143.       4750055.
'LABSCRB '     1352.59       6.096         377923.       4750113.
'CSS     '     1352          8.2296        377618.       4750300.
'RVS     '     1352.05       8.2296        377646.       4750273.
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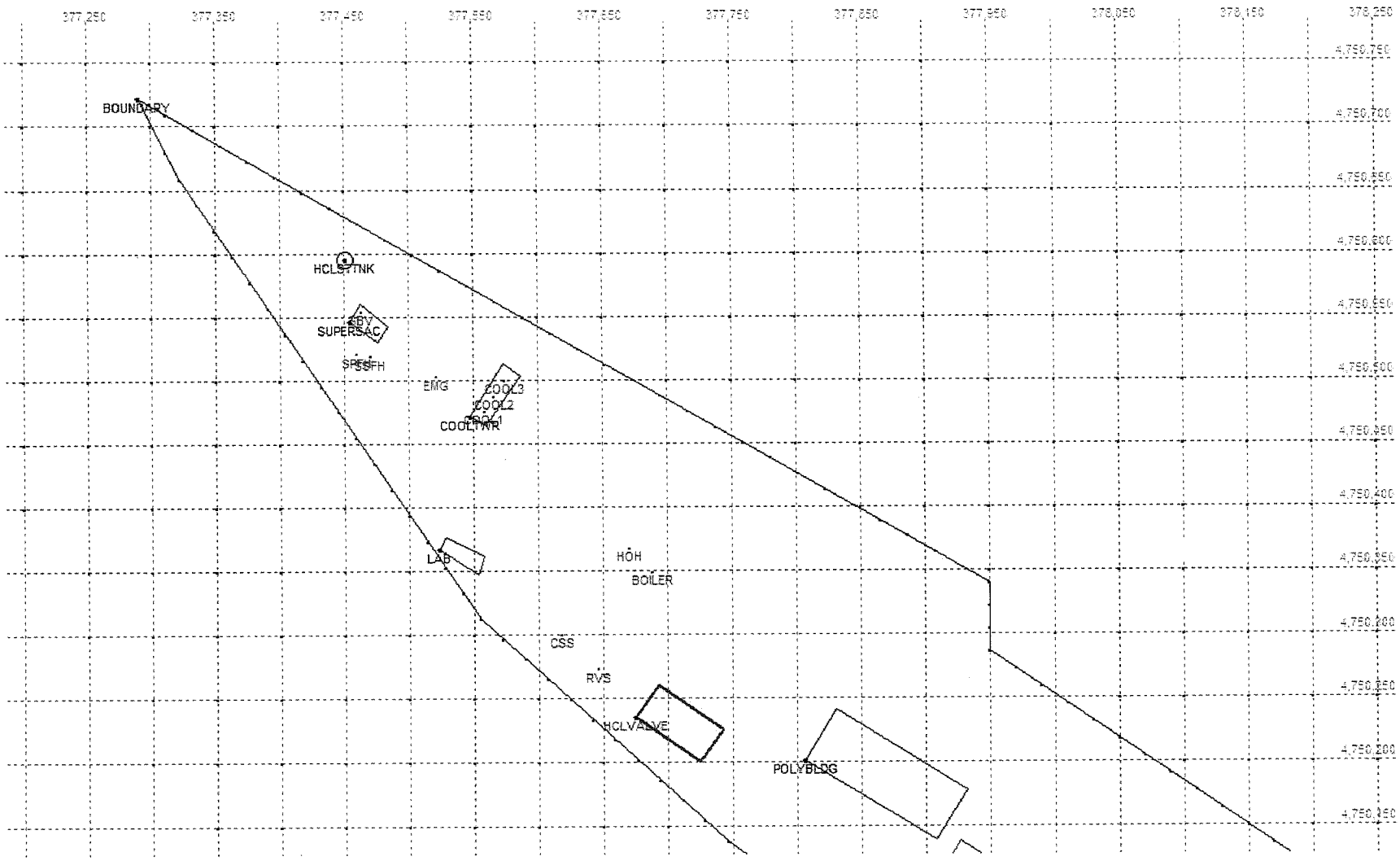
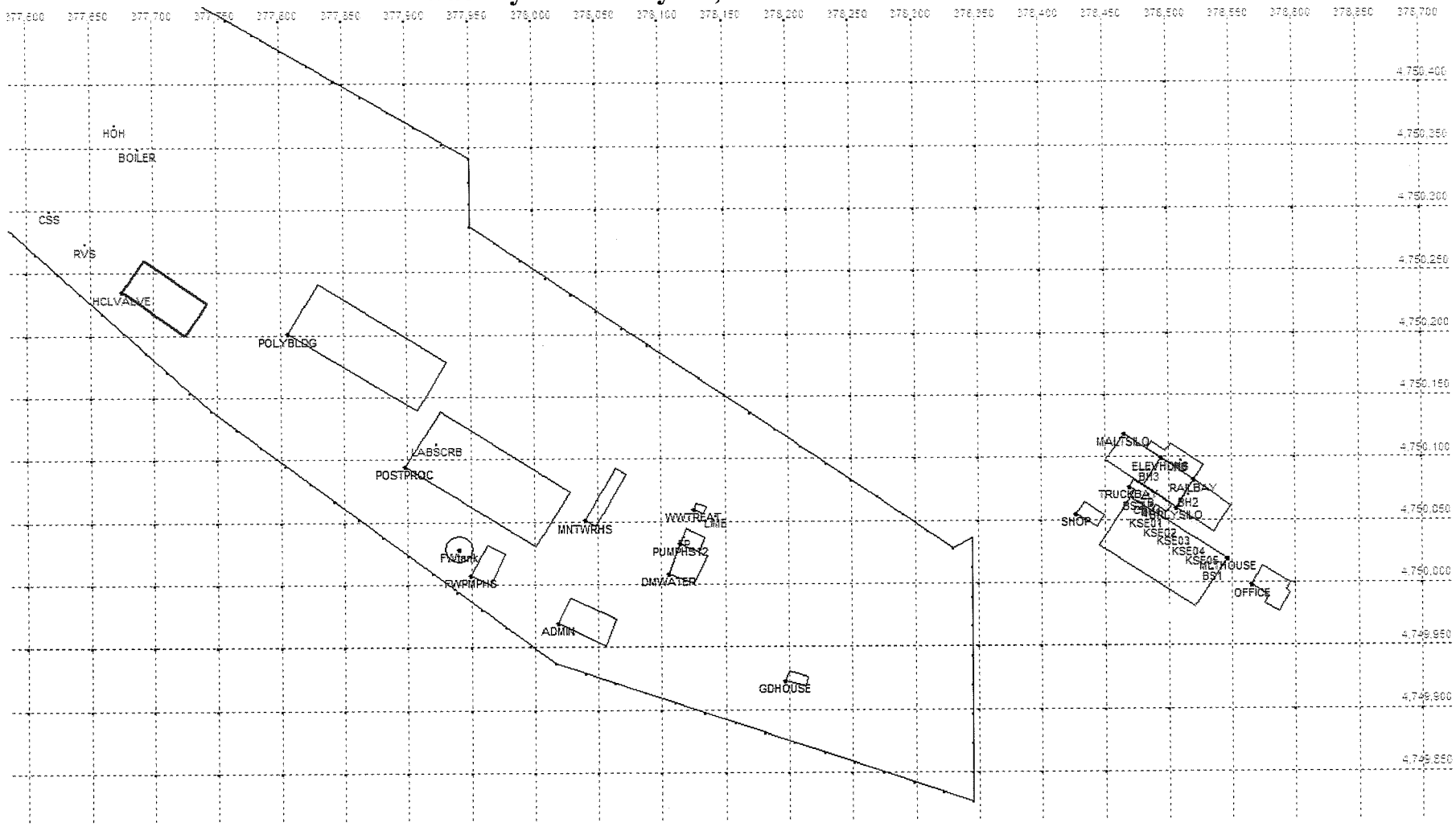
Appendix B
Facility Model Layout, Zoom on West Half



Facility Model Layout, Zoom on East Half



Appendix C

IDEQ Modeling Protocol Approval

The letter approving the Modeling Protocol for this project is on the following page. The EAMAIL below documents IDEQ protocol approval holds with the layout modifications identified after the modeling protocol was approved.

Chris,

On Hoku, the protocol still stands as approved provided the modeling accounts for changes in the buildings.

Kevin

From: Chris Johnson [mailto:cjohnson@jbrenv.com]
Sent: Tuesday, March 25, 2008 11:43 AM
To: Kevin Schilling
Cc: Melissa L. Armer; Dan Heiser; Darrin.Mehr@jbrenv.com
Subject: RE: Nonpareil modeling and protocol planning, also Hoku modeling protocol

Kevin,

This message follows up a message I timed out trying to leave on voice mail.

I have modeling protocol issues with two high priority JBR projects we've had meeting on to prepare protocols (Nonpareil) or have approved protocols for (Hoku). Both of these projects proponents hope we can make a submission to IDEQ this week.

Hoku:

I submitted a modeling protocol IDEQ approved earlier this month. That protocol indicated planned changes in some stack parameters (primarily flow and emission rates), and stated that no buildings or stack locations were changed from the 2007 modeling for the facility. That was the information I had at the time. Q/A during preparation of final modeling runs has verified that there while there were no process changes, there were facility design changes resulting in different building and stack locations.

I plan to perform the final modeling consistent with current engineering plans. Because the modeling protocol specifically stated no changes in building locations or stacks based upon information available at that time, and I have now learned that there will be changes in building and stack locations, I would like to check the process to make sure that the modeling protocol approval will remain valid when remodeling with mapping consistent with current plans. If an addendum to the modeling protocol is recommended, please consider this a request for IDEQ approval of such an addendum. If you recommend anything else, please share details.

Thank you,

...cj

Chris Johnson
(208) 628-4036

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 NORTH HILTON, BOISE, ID 83706 · (208) 373-0502

C. L. "BUTCH" OTTER, GOVERNOR
TONI HARDESTY, DIRECTOR

March 17, 2008

Chris Johnson
JBR
Boise, Idaho

RE: Modeling Protocol for Proposed Modifications to the Hoku Scientific Polysilicon Facility Located in Pocatello, Idaho

Chris:

DEQ received your dispersion modeling protocol on March 10, 2008. The modeling protocol was submitted on behalf of Hoku. The modeling protocol proposes methods and data for use in the ambient impact analyses of a Permit to Construct application for modifications to the Hoku Scientific Polysilicon Facility located in Pocatello, Idaho.

The modeling protocol has been reviewed and DEQ has the following comments:

> Comment 3: Documentation and Verification of Stack Parameters. The application should provide documentation and justification for stack parameters used in the modeling analyses, clearly showing how stack gas temperatures and flow rates were estimated. In most instances, applicants should use typical parameters, not maximum temperatures and flow rates. If the application does not clearly indicate how values for parameters were measured or calculated, even through previous applications provided such information, the application will be determined incomplete. Each application must be complete in itself, providing documentation and justification for data and methods used.

DEQ's modeling staff considers the submitted dispersion modeling protocol, with resolution of the additional items noted above, to be approved. It should be noted, however, that the approval of this modeling protocol is not meant to imply approval of a completed dispersion modeling analysis. Please refer to the *State of Idaho Air Quality Modeling Guideline*, which is available on the Internet at http://www.deq.state.id.us/air/permits_forms/permitting/modeling_guideline.pdf, for further guidance.

To ensure a complete and timely review of the final analysis, our modeling staff requests that copies of all modeling input and output files are submitted with an analysis report. If you have any further questions or comments, please contact me at (208) 373-0112.

Sincerely,

Kevin Schilling

Kevin Schilling
Stationary Source Air Modeling Coordinator
Idaho Department of Environmental Quality
208 373-0112