

415-A-4

Ocean Ave.

Quarry - Zero change

Dragon Products

on Spreadsheet

# City of Portland Planning Department

389 Congress Street, 4th Floor  
Portland, ME 04101  
(207)874-8721 or (207)874-8719  
Fax: (207)756-8258

## FAX TRANSMISSION COVER SHEET

Date: \_\_\_\_\_

To: Brad Kaufman

Company: \_\_\_\_\_

Fax #: 552-7980

From: Sarah Hopkins

RE: \_\_\_\_\_

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YOU SHOULD RECEIVE 3 PAGE(S),  
INCLUDING THIS COVER SHEET.  
IF YOU DO NOT RECEIVE ALL THE PAGES,  
PLEASE CALL (207)874-8721 OR (207)874-8719.



**Jacques Whitford  
Company, Inc.**

Consulting Engineers  
Environmental Scientists  
Risk Consultants

75 Pearl Street, Suite 201, Portland, Maine, U.S.A. 04101  
Tel 207 781 7790 Fax 207 772 0385

World Wide Web: [www.jacqueswhitford.com](http://www.jacqueswhitford.com)  
E-mail: [info@jacqueswhitford.com](mailto:info@jacqueswhitford.com)

Attachment 2

Maine • New Hampshire • Vermont • New York • Tennessee • Florida • Argentina  
Nova Scotia • New Brunswick • Prince Edward Island • Newfoundland & Labrador • Quebec • Ontario • Saskatchewan • Alberta • British Columbia • Northwest Territories

October 17, 2001

Mr. Dave Grinnell  
Dragon Products Company  
38 Preble Street  
P.O. Box 1521  
Portland, Maine 04104

Re: Probability of Damage Assessment, Proposed Quarry Expansion, Ocean Avenue Quarry,  
Portland, Maine

Dear Mr. Grinnell:

Jacques Whitford Company, Inc. (JWC) is pleased to provide this report regarding Dragon Products Company's (Dragon) proposed quarry expansion project in Portland, Maine. This report provides clarification of information we provided in our report to Dragon dated July 18, 2001.

JWC understands that the Maine Department of Environmental Protection's (MDEP) Quarry Performance Standard peak particle velocity limit of 1 inch/sec would apply to the Dragon quarry expansion. Based on US Bureau of Mines research<sup>1,2</sup>, a peak particle velocity of 1 inch/sec corresponds to a probability of damage on the order of 1 percent. Therefore, the estimated 400 blast events proposed for the quarry could result in up to 4 incidents of damage where residences are subjected to peak particle velocities of 1 ips. In the context of this research, the threshold of damage was defined as "cosmetic damage of the most superficial type, of interior cracking that develops in all homes, independent of blasting."<sup>1</sup> Thus, even if 4 incidents of damage should occur over the 20 to 30 year period of quarry operations, the type of damage is likely to be very minor, and cosmetic in nature.

The City of Portland has further reduced the peak particle velocity target for the Ocean Avenue site to a limit of 0.75. Based on studies of blasting by the US Bureau of Mines, no blast-induced damage (*i.e.*, zero percent probability) was observed at particle velocities below 0.75 ips<sup>1</sup>.



Geotechnical Engineering • Materials Engineering • Mining Engineering • Petroleum Engineering • Air Quality • Environmental Sciences  
Environmental Engineering • Hydrogeology • Environmental Management Systems • Integrated Risk Management Services

Mr. Dave Grinnell  
October 17, 2001  
Page 2

At the relatively low particle velocities allowed by MDEP and the City of Portland, and the limited number of blast events proposed by Dragon, the probability of damage from each blast event is independent (i.e., not cumulative). Research has shown that damage associated with long-term fatigue is likely to occur only at relatively high vibration levels, or after thousands of blast events<sup>2</sup>. For example, vibration tests by the US Army Corp. of Engineers' Civil Engineering Research Laboratory indicated damage to a test room only after 2,669 vibration events and a vibration level of 4.0 ips<sup>2</sup>. Other tests run at a lower particle velocity of about 0.5 ips indicated damage to a wood frame house only after the equivalent of about 20,000 blast events<sup>2</sup>. The damage observed was a cracked wall-board tape joint.

It is reasonable to conclude that if blast events are managed as anticipated, no damage to homes in the vicinity of the quarry would occur. Please do not hesitate to contact us if you have any questions or require additional information. JWC appreciates the opportunity to assist Dragon Products Company.

Sincerely,  
Jacques Whitford Company, Inc.



D. Todd Coffin, C.G.  
Senior Environmental Geologist

MEP00123\probability 10 17 01

<sup>1</sup> Charles H. Dowding, "Blast Vibration Monitoring and Control," Northwestern University, 1985.

<sup>2</sup> Calvin J. Konya and Edward J. Walter, "Subsurface Blast Design," Prentice Hall, Englewood Cliffs, New Jersey, 1990.



ATT 4

October 15, 2001

Mr. Jaimey Caron  
Chair, Portland Planning Board  
City of Portland  
City Hall  
389 Congress Street  
Portland, ME 04101

Dear Mr. Caron:

On May 29, 2000, the residents of Summer Place wrote to express our opposition to Dragon's Contract Zoning Agreement. A copy of that letter is attached hereto by way of reference. In the intervening time, our representatives have attended various neighborhood meetings and workshops concerning this proposed change. Our representatives have reviewed the various engineering reports and other data made available to us along with contract changes proposed by Dragon and the Portland Planning Board.

Notwithstanding your board's efforts to make this proposal attractive and acceptable to the neighborhoods by imposing certain requirements, restrictions, limitations and other conditions on Dragon, we steadfastly maintain our view that the improvements proposed in the plant appearance, plant location and operations and traffic, to mention a few key requirements, do not compensate for the degradation in the quality of our lives which would occur if the Contract Zoning Agreement is approved and Dragon is permitted to commence blasting and mining operations. Therefore, we urge the board to reject and deny this proposal based on the following:

The property is currently zoned R-3

The property was acquired on speculation in 1962 and 1985

Expansion of a non-conforming use should be prohibited

The proposed use is incompatible with the residential developments and subdivisions approved in the 1980's and 1990's

The proposed use is inconsistent with Portland's Comprehensive Plan

Portland needs to "protect neighboring residential zones" and "promote compatible development"

The proposed use would not be permitted in a heavy impact industrial zone, much less a residential zone

Dragon cannot meet existing performance standards with respect to vibration or noise

Structural damage to some neighborhood homes will almost certainly occur over the blast period for 20 to 30 years

The proposal is inconsistent with our vision of Portland, and Portland's vision of Portland

There are numerous other reasons (legal, political and moral) why this proposal should be rejected and denied, but the above certainly represent sufficient grounds for the Portland Planning Board to do so, in our collective opinion. Please do so forthwith.

Thank you for your consideration of our position on this matter.

David Seaman

A handwritten signature in black ink, appearing to read "David T. Seaman", with a long horizontal flourish extending to the right.

President  
Summer Place Association  
37 Summer Place  
Portland, Maine 04103

cc: The Honorable Cheryl Leeman, Mayor  
Alexander Jaegerman, Chief Planner

10/9/01

Ms. Sarah Hopkins,

Cheverus High School built a parking lot & they had blasting. I do not have the finances to get a lawyer, but my sewer collapsed costing me \$3500. my neighbor had his garage floor cracked from the blasting.

The insurance company for the blasting company hired "engineers" to say this was not their fault.

My house shook I thought it was collapsing. I cannot afford to get my own group of engineers to check this out & I cannot get a lawyer.

I bet if you checked in the back covered other homeowners had their property damaged. My other neighbor Mr. Fallowitch had his sewer pipe collapse & lives right on the Blvd.

I am just so frustrated, I should get my \$3500 back but I cannot put out another \$2500 for a lawyer.

I think the people near Oregon  
should be aware of the damage  
they will receive.

I think I will call John Gutwien  
& let him know what happened  
to us.

Thank you,

Andrea Nespolitano  
51 George St  
Portland, Me 04103



Bradley L. Kauffman  
776 Ocean Avenue  
Portland, ME 04103

October 9, 2001

Jaimey Caron  
Chair, Portland Planning Board  
City Hall  
389 Congress Street  
Portland, ME 04101

Dear Mr. Caron,

My wife and I live at 776 Ocean Avenue, just down the road from Dragon Products. I am writing in regard to Dragon's proposal to resume blasting and mining at its Ocean Avenue facility. This letter expands upon the remarks that I offered at the workshop on September 25th.

Though the facts of this case are complex, the bottom line is simple: Dragon's proposal fails to meet two specific legal requirements for the creation of a contract zone. Accordingly, I urge the Planning Board to reject Dragon's proposal at the upcoming public hearing on October 23rd.

**A. 30-A M.R.S.A. Section 4352(8):**

Section 4352(8) of Title 30-A authorizes the creation of contract zones. However, Section 4352(8)(B) requires that contract rezoning: "Establish rezoned areas that are *consistent* with the existing and permitted uses within the original zones." (Emphasis added). Obviously, it is the intention of Section 4352(8) to allow the flexibility afforded by contract zoning but to place constraints on that flexibility by requiring consistency with the original zone.

The question before the Planning Board, therefore, is whether Dragon's proposal satisfies the constraints imposed by Section 4352(8)(B) by maintaining consistency with the original zone. As you consider the answer to this question, please keep five important facts in mind.

**1. Dragon's proposal contravenes the express purpose of the original zone.**

The original zone in this case is R-3 residential. Section 14-86 of the Portland Zoning Ordinance describes the purpose of the R-3 residential zone as follows:

To provide for medium density residential development characterized by single family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and *complement* the scale, character, and style of the surrounding neighborhood. (Emphasis added).

**2. Dragon's proposed use would not be permitted in any zone in the city of Portland.**

Obviously, Dragon's proposed use would not be permitted in any residential zone. But neither would Dragon's proposed use be permitted in any of the industrial zones in the city of Portland. The I-L and I-M zones specifically prohibit mining and drilling and the I-H zone specifically prohibits extraction of raw materials.

**3. Dragon's proposal is without precedent in the city of Portland.**

Contract zoning has never been used by the city of Portland to extend the permitted use so far beyond the express purpose of the original zone. Moreover, to the best of my knowledge, contract rezoning has never been utilized to convert residential property to industrial use. I'd suggest that it has never been done because change of such magnitude can't meet the consistency requirement.

**4. Physical damage to surrounding structures is a near certainty.**

Dragon has recently revised its estimate of the per-blast risk of physical damage to surrounding homes to 1%. Dragon, however, is not proposing to blast once. Instead, Dragon proposes to blast 400 to 600 times. As my prior letter (dated June 9, 2001) explains, the risk created by a single blast and the risk created by the series of blasts are two very different things.

This conclusion was confirmed by Dr. Muhammad El-Taha, the Chair of the Math & Statistics Department at USM. In fact, at 400 blasts the probability of escaping damage altogether is less than 2% and the likely outcome is damage on 4 occasions. At 600 blasts, the probability of escaping damage is less than .25% and the likely outcome is damage on 6 occasions. The laws of probability require the Planning Board to assume that approval of Dragon's proposal will result in damage to surrounding homes on at least one occasion.\*

The same analysis applies to the adjacent landfill. Dragon has not specified the per blast risk to the landfill, but there is no reason to expect that the risk is any smaller than the risk to surrounding homes. If the per-blast risk of damage to the landfill is 1%, then the risk created by the series of blasts is as described above: at 400 blasts the probability of avoiding damage is less than 2% and damage is likely on 4 occasions; at 600 blasts the probability of avoiding damage is less than .25% and damage is likely on 6 occasions.

The Planning Board must also assume, therefore, that approval of Dragon's proposal will result in damage to the landfill on at least one occasion. Unlike damage to existing homes, however, the damage from escaped toxins may not be correctable.

**5. Dragon effectively concedes that its proposal does not meet the requirements of Section 4352(8)(B).**

Section 5 of Dragon's proposed contract reads as follows: "These areas, or any portions of them, may not be separately conveyed apart from the property as a whole, while any blasting, mining, concrete manufacturing, or other uses *not consistent* with the underlying R-3 or successor zone are being conducted on the Property." (Emphasis added). Dragon, in other words, effectively concedes that its proposal does not meet the requirements of Section 4352(8)(B).

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\* I am not mollified by Dragon's claim that any physical damage is likely to be cosmetic rather than structural. My property rights protect the *physical integrity* of my home. Certainly, no one would expect me to turn the other way while Dragon painted my home orange, though that damage, too, would be merely cosmetic.

Given these facts, I think the answer to the question posed above is obvious: Dragon's proposal fails to meet the requirements of Section 4352(8)(B). How could it be otherwise? Surely, neither the Planning Board nor the City Council can look the neighbors in the eye and tell us that the consistency requirements of Section 4352 have been met when:

- Contract rezoning has never been used in Portland to convert residential property to industrial use;
- Dragon's proposal contravenes the express purpose of the original R-3 zone;
- No zone in the city permits the use proposed by Dragon;
- Damage to surrounding homes and the adjacent landfill is a near certainty; and
- Dragon effectively concedes that its proposal does not meet the consistency requirements.

Indeed, to find that this set of facts satisfies the consistency requirement of Section 4352(8)(B) would be to render the section wholly devoid of meaning, certainly not the outcome that the legislature intended. No matter how attractive "the deal" offered by Dragon might appear to some, if the proposal fails to meet the requirements of Section 4352(8)(B) then the Planning Board and the City Council have no choice but to reject it.

#### **B. Section 14-264 of the Portland Zoning Ordinance:**

Among the requirements of Section 14-264 is the following: the applicant for contract rezoning must carry the burden of proof to show that the proposed development will not substantially diminish the value or utility of neighboring structures.

Since Section 14-264 is found in Division 15, I-H and I-Hb Industrial Zones, its provisions must apply to a contract rezoning that calls for more intense use than would be permitted in an I-H or I-Hb zone. Of course, that's exactly what Dragon has proposed; even in an I-H zone, extraction of raw materials is a prohibited use.

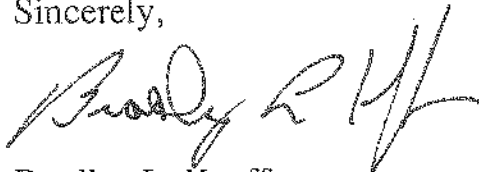
Accordingly, the Planning Board must require Dragon to meet the burden of proof regarding surrounding property values imposed by Section 14-264. Any other result would be absurd. Certainly, Dragon should not be exempt from Section 14-264 because the original zone is an R-3 zone; if anything, the bar should be set higher because the original zone is R-3. Neither should Dragon be exempt because it has decided to describe the resulting zone as I-L; whatever label Dragon prefers, the uses proposed by Dragon go beyond those permitted in an I-H zone.

Accordingly, unless and until Dragon satisfies the burden of proof imposed upon it by Section 14-264, the Planning Board and the City Council have no choice but to reject Dragon's proposal.

In conclusion, I respectfully submit that Dragon has failed to meet two specific legal requirements for the establishment of the proposed contract zone. As a result, I urge the Planning Board to fulfill its legal obligation and reject Dragon's proposal at the public hearing on October 23rd.

Thank you for taking the time to consider my thoughts.

Sincerely,

A handwritten signature in black ink, appearing to read "Bradley L. Kauffman". The signature is written in a cursive, somewhat stylized font.

Bradley L. Kauffman

cc: Honorable Cheryl Leeman  
Sarah Hopkins, Planning & Urban Development

Wednesday  
19th September, 2001

410 Presumpscot Street  
Portland,  
ME 04103

Dear Sarah!

Unfortunately, I shall be out of the country on Tuesday, 25th September when Dragon Cement comes before the Planning Board for review.

As you know I am very much opposed to their new demands for expansion. Seems each time they appear, they have added new bits & pieces to their request, and not for the better.

I have in front of me copies of several letters dated February 1998, from the residents of Summer Place voicing their concerns regarding the resumption of blasting by Dragon Cement. I certainly have the same concerns.

My house is quite small & sits on ledge. It shook before when books used to blast, imagine the results now.

Actually, I don't think any member of the Planning Board is fully qualified to assess the damage to people's homes. I have read the reports from the engineers etc. (mostly hired by Dragon)

Dragon Cement knew the zoning in 1991, but yet continued to buy up the surrounding land which was R-3.

Ocean Avenue in front of their business is a downright disgrace. They ought to take a page out of Blue Rock premises on Brighton Avenue

there is absolutely no comparison.

Well I could go on but my comments are too many to mention.

I just keep hoping that someone at City Hall will listen + pay attention to the concerned residents.

Thank you.

Yours truly,  
Margaret Brown  
(Mrs.)

P.S. Wouldn't like a repeat.

Many years ago the land next door was rezoned industrial, without my knowledge, as I was out of the country then also.

Bradley L. Kauffman  
776 Ocean Avenue  
Portland, ME 04103

Jaimey Caron  
Chair, Portland Planning Board  
City Hall  
389 Congress Street  
Portland, ME 04101

June 9, 2001

Dear Mr. Caron,

My wife and I live at 776 Ocean Avenue, just down the road from Dragon Products. I am writing in regard to Dragon's proposal to resume blasting and mining at its Ocean Avenue facility.

Over the past two years, I have invested a great deal of time and energy in learning about Dragon's proposal. I have talked with the staff of the Planning Board, attended a workshop, met with representatives from Dragon, discussed the proposal with Mayor Leeman, reviewed the draft contract, and attended the two neighborhood meetings at the Presumpscot School.

I must commend Dragon on its willingness to engage the neighborhood in dialogue and to make information available. I must also say that I would like to see a reduction in truck traffic on Ocean Avenue and the relocation of Dragon's facility away from the street. Nevertheless, I have grave concerns about the risks that would be created by the blasting and must oppose the proposed contract zone.

Dragon has assured the neighbors that the risk of damage to surrounding homes from blasting is only 5%. It's important to keep in mind, however, that Dragon proposes to blast not once but 400 to 600 times over a 20 to 30 year period and that *each of the blasts* creates a 5% risk of damage to surrounding homes.

One of the very few things I remember from college statistics is that the risk associated with a series of events is not the same as the risk associated with each event in the series. To help quantify the risk associated with the series of blasts, I turned to Muhammad El-Taha, the Chair of the Department of Mathematics and Statistics at the University of Southern Maine. I sent Dr. El-Taha an email and posed the following question:

If each blast creates a 5% risk of damage to surrounding homes, what is the risk of damage created by 400 to 600 blasts?



Dr. El-Taha responded that it is "almost certain" that damage to surrounding homes will occur on at least one occasion. In fact, he concluded that the chance of escaping damage altogether is only 1 in 10 trillion if Dragon blasts a total of 600 times and 1 in 100 million if Dragon blasts 400 times. Moreover, Dr. El-Taha concludes that the likely outcome is damage on 30 separate occasions if Dragon blasts 600 times and damage on 20 separate occasions if Dragon blasts 400 times. For your reference, both my email to Dr. El-Taha and his response are attached.\*

Despite Dragon's assurances, the risk of damage to surrounding homes is *not* 5%. Instead, damage on at least one occasion to surrounding homes is a virtual certainty and damage on multiple occasions is likely. In assessing Dragon's proposal, therefore, the Planning Board and the City Council must assume that approval will result in damage to surrounding homes on at least one occasion and that damage is likely to occur on 20 to 30 separate occasions.

Though Dragon has never quantified the risk of damage to the adjacent landfill from a single blast, the same type of logic applies. Even if the risk of damage from a single blast is quite low, the risk of damage from 400 to 600 blasts is -- as Dr. El-Taha's reply demonstrates -- orders of magnitude greater. Please keep in mind that while the landfill itself might be repaired if damage occurs, the damage from toxins that escape into the environment cannot.

The first page of the proposed contract includes the following paragraph:

"WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY's comprehensive land use plan and *consistent with* the existing and permitted uses within the original R-3 zone." (Emphasis added).

This paragraph is not mere contract boilerplate. In fact, it describes a key legal requirement for the establishment of a contract zone. As the paragraph suggests, the City Council must determine that the blasting and mining proposed by Dragon would be *consistent with* the existing and permitted uses within the original R-3 zone.

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\* I should underscore the fact that Dr. El-Taha is not an expert on the subject of blasting and his response is not about blasting per se. Dr. El Taha's response assumes the accuracy of the facts as I presented them and merely quantifies the risk associated with repeated occurrences of an event based upon the risk associated with a single occurrence.

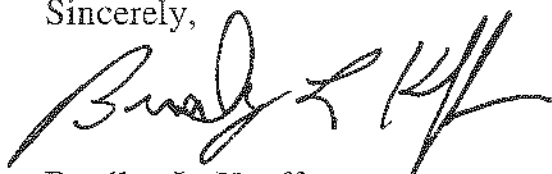
It's hard to believe that a series of 400 to 600 blasts, a use that we must assume will cause damage on multiple occasions to surrounding homes, could be consistent with the existing and permitted uses within the original R-3 zone. Even Dragon doesn't believe it to be so. Section 5 of the contract draft distributed at the last neighborhood meeting describes both blasting and mining as uses *not* consistent with the underlying R-3 zone.

I realize that the Planning Board is trying to balance the competing interests of adjacent landowners and do the right thing for the neighborhood. I also understand the allure of the deal proposed by Dragon: in exchange for 20 blasts per year, Dragon will remove a terrible eyesore and eliminate a large volume of truck traffic. But the neighbors should not be asked to pay for these benefits by shouldering the burden of almost certain damage to their homes and significant risk of damage to the adjacent landfill.

Moreover, the law protects the neighbors from just this sort of "bargain." Regardless of the benefits offered, the law requires that the proposed use be consistent with the uses permitted by the underlying R-3 zone. Surely, neither the Planning Board nor the City Council can look the neighbors in the eye and tell us that Dragon's proposal -- which we must presume will result in damage to our homes and to the landfill -- meets this requirement.

Thank you for taking the time to consider my thoughts on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bradley L. Kauffman', with a stylized flourish at the end.

Bradley L. Kauffman

cc: Members of the Portland Planning Board  
Members of the Portland City Council  
Sarah Hopkins, Planning & Urban Development  
David Grinnell, Dragon Products  
Chris Neagle, Verrill & Dana  
Charles M. Yandell, Summer Place  
Muhammad El-Taha, University of Southern Maine

From: "Muhammad El-Taha" <eltaha@usm.maine.edu>  
To: <BLKJLA@aol.com>  
Date: Mon, Apr 16, 2001 9:50 AM  
Subject: Re: Question Regarding Probability

Your figures, based on 400 and 600 blasts, are quite accurate. They however, represent the "expected number of blasts that will cause damage to the soundings". However, if your concern whether will be damage at all the picture is more gloomy. At 600 blasts the chances that none will result in damage is less than one in 10 trillion. At 400 blasts the chances that non will result in damage is less than one in 100 million. You are almost certain that there will be damage during 400-600 blasts.

The extent of the damage is already computed by you correctly. That is it is expected to happen on 20 occasions for 400, and 30 occasions for 600 blasts. The cost depends on what will be damaged.

Note : My numbers (and yours) are based on the data and problem description you provided and on the assumption of independence which means if one blast causes damage that does not affect whether a future blast will/will not cause damage. Because the damage can be cumulative (not independent), these figures are quite conservative which means if the 5% figure is accurate the situation could be much worse than the figures indicate.

Good Luck,  
Muhammad

On 15 Apr 2001, at 16:35, BLKJLA@aol.com <BLKJLA@aol.com> wrote:

> Dear Dr. El-Taha,  
>  
> My name is Brad Kauffman and I live at 776 Ocean Avenue in  
> Portland, just down the street from the Dragon Concrete Plant. I need  
> an expert opinion regarding the probable outcome of a proposal that  
> Dragon has before the Portland Planning Board and I was hoping that  
> you might be able to help.  
>  
> Dragon has proposed that it be allowed to resume blasting at its Ocean  
> Avenue site. In exchange, Dragon has offered to move the plant 300  
> feet from the road, landscape the frontage along Ocean Avenue, and  
> reduce truck traffic to and from the site.  
>  
> The neighborhood is, of course, concerned about the potential impact  
> on our homes from the blasting. The blasting experts have told us  
> that the blasting is "safe" in the sense that there is only a 5%  
> chance that a blast might cause damage to surrounding homes.  
>  
> The proposal, however, is not for a single blast but for 20 blasts a  
> year for 20 to 30 years, or a total of 400 to 600 blasts. Drawing on  
> what little I remember from college statistics, and assuming the

> accuracy of the 5% probability provided by the experts, I come to the  
> following conclusions regarding the risk associated with the series of  
> blasts proposed by Dragon:  
>  
> \* At a total of 400 blasts, the odds are 20 to 1 that there will be  
> damage to surrounding homes on at least one occasion. At 600 blasts,  
> the odds are 30 to 1.  
>  
> \* At a total of 400 blasts, we should expect damage on 20 separate  
> occasions. At 600 blasts, we should expect damage on 30 separate  
> occasions.  
>  
> I realize that laymen (a group in which I include myself) are  
> notoriously bad at assessing the probability of real world events. So  
> I don't want to jump to conclusions. The benefits that Dragon is  
> offering in exchange for the right to blast are significant. I want  
> to make sure that I am weighing the benefits against the risk of  
> damage as accurately as I can. Are my conclusions above valid? Can  
> you offer any guidance about how to assess the risk associated with  
> the series of blasts that Dragon proposes?  
>  
> I hope I am not imposing with this request. I thought that you, as  
> the chair of the math and statistics department at USM, would be in a  
> good position to offer objective advice about the risk associated with  
> a series of events based on information about the risk associated with  
> a single event.  
>  
> Thank you for taking the time to consider my request.  
>  
> Sincerely,  
>  
> Brad Kauffman  
> 776 Ocean Avenue  
> Portland, ME 04103  
> (207) 773-5286

-----  
Muhammad El-Taha, Professor, Chair and  
Graduate Program Director  
Department of Mathematics and Statistics  
University of Southern Maine

Email: [eltaha@usm.maine.edu](mailto:eltaha@usm.maine.edu)  
<http://www.usm.maine.edu/~eltaha>  
Phone: (207)780-4564  
FAX: (207)780-5607

CC: <[blkjla@aol.com](mailto:blkjla@aol.com)>

22 Wildwood Circle  
Portland, ME 04103  
July 24, 2000

Honorable Cheryl Leeman  
37 Savoy Street  
Portland, ME 04103

Subject: Dragon Cement Project

Dear Mayor Leeman:

It was a pleasure talking with you last Wednesday night. I am a resident of Alden's Walk Condominium and a member of the Board of Directors. My unit is approximately 1300 feet from the proposed Dragon Company blasting area.

Initially I was not concerned about Dragon's plan but, after attending two informational meetings in which the issues outlined below were discussed, I am now worried and opposed to it.

1. Any gains from the Dragon expansion will be enjoyed by the Company, not the taxpaying homeowners. Apparently all we get is industrial noise, pollution and the chance of damage to our homes.
2. We have found Dragon's answers to questions vague and/or demonstrating a lack of knowledge and technical expertise, perhaps intentionally.
3. The Company has no knowledge of the long term effects of the proposed blasting. Will there be hidden cumulative damage which will suddenly manifest itself in a disasterous failure?
4. Why hasn't a seismic study of this area been made by a qualified independent engineering company?
5. What effect will the vibration from blasting have on radon release?
6. Dragon has offered to survey our homes to prove or disprove damage claims.
  - a. Who will monitor the survey work and maintain the records. Are we to trust the Company?
  - b. There is no written guarantee that they will pay in full for damages. They could deny the claim or tie the plaintiffs up in litigation indefinitely.
  - c. A damage escrow account has not been established. Wouldn't that be a first step in establishing trust?
  - d. There is no mention of an independent arbitrator for damage claims.

Unless Dragon Cement Company can eliminate the source of these concerns and demonstrate why the homeowners should trust them I strongly recommend that the Planning Board and City Council reject the plan.

Thank you.

Very truly yours,



Robert R. Peck

CC:

Mr. Christopher Neagle  
Verrill & Dana  
One Portland Square  
Portland, ME 04112-0586

Mr. John M. McGorrill  
6 Fieldstone Court  
Portland, ME 04103

Mr. Bruce Campbell  
17 Graystone Lane  
Portland, ME 04103

Planning Board  
City of Portland  
City Hall - 389 Congress Street  
Portland, ME 04101

Mr. Chris Brigham  
31 Summer Place  
Portland, ME 04103

July 10, 2000  
474 Presumpscot St.  
Portland, ME 04103-5219

Portland Planning Department  
Att. Sarah Hopkins  
389 Congress St.  
Portland, ME 04101

Sarah:

Regarding Dragon Products Co. request to mine rock at their Ocean Ave. plant, I would like to suggest that they not sound the warning whistle, or blast, at the times that school children in the area are going to, or returning home from school, if permission is granted to them.

I spoke to Mr. Grey of the Planning Dept. and Mr. Grinnel of Dragon Products about this idea and both were very receptive of my suggestion.

Thank you for considering it.

Yours Truly  
~~Ethel H. DeVito~~

Ethel H. DeVito

SCOTT ASSOCIATES  
CERTIFIED PUBLIC ACCOUNTANTS

BARRY E. SCOTT, CPA  
STEVEN D. SCOTT, CPA

12 REVERE STREET  
PORTLAND, MAINE 04103  
TEL. (207) 772-0441  
FAX (207) 772-2636

July 20, 2000

Planning Board  
City of Portland  
389 Congress Street  
Portland, Maine 04101

Re: Dragon Cement

To Board Members:

Unfortunately, I was unable to attend the meeting relative to Dragon Cement resuming blasting.

I do not have any axe to grind for either side, but it appears that the opponents object strenuously to Dragon's proposal.

My wife and I live on Byfield Road in Portland, approximately five hundred (500) feet from the construction of The Atrium at Cedars. Very extensive blasting was necessary for that construction. The technicians handled it beautifully and we, as residents, had absolutely no problem with it.

It would appear that Dragon's blasting would be a much greater distance from residents of the area than we were.

I am assuming that most of the objection may come from the new development across the street from Dragon. May I point out, needlessly of course, that the Quarry was operating at this location many decades before the construction of that development.

Yours truly,



Barry E. Scott



*Richard and Mary Perkins*  
794 Ocean Avenue  
Portland, Maine

---

July 18, 2000

**HAND DELIVERED**

Joseph E. Gray, Jr.  
Director of Planning & Urban Development  
City Hall  
389 Congress Street  
Portland, ME 04101

Re: Dragon Products Company  
Contract Zone Request

Dear Mr. Gray:

My wife and I have been residents at 790-794 Ocean Avenue, Portland, Maine, since January 1995. We wish to raise objections to Dragon's request to rezone their property under a proposed contract zoning agreement with the City allowing expansion of their mining, blasting and processing operation at their quarry site.

Our home may be the oldest surviving house in the Greater Portland area, having been built c. 1728. Prior to moving into the house in 1995, we spent over two years extensively renovating and expanding the house and adjacent carriage house. We spent a substantial sum in renovations, and although we knew of Dragon Products' operation, we never dreamed that the City in the future would consider allowing their rock mining and blasting operation to expand into adjacent R-3 zoned land. From conversations and neighborhood meetings, we can tell you that many neighbors are surprised that this expansion is even being considered!

We will outline our objections and reasoning as follows:

1. Comprehensive Land Use Plan - Inconsistency *(See excerpts below)*
  - a. Dragon Products Company, Inc., Agreement

WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY's comprehensive land use plan and consistent with the existing and permitted uses within the original R-3 zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and...

b. The above wording states that the rezoning is consistent with the City's comprehensive land use plan and consistent with existing and permitted uses within the original R-3 zone. This is simply untrue and inaccurate. Expansion of a non-conforming use (mining) is inconsistent with this neighborhood's residential zoning. Furthermore, mining certainly isn't permitted in an R-3 zone.

c. The City changed the industrial zoning to residential a few years ago at the site that is now Summer Place, which lies diagonally across the street from the Dragon site. Several hundred yards below Summer Place, Ocean Woods Condos were developed, and the City recently permitted Phase 2. Pheasant Run and Ledgewood development are further residential projects approved and completed and are adjacent to the power line running between Dragon's property and them. Wellstone I and II and Briarwoods also are in this Ocean Avenue neighborhood.

d. The very fact that the Planning Department has even considered this inconsistent, industrial, and mining operation is hard to understand. The fact that it has momentum gives a healthy distrust of our publicly elected officials. The question ought to be: "Who stands to gain here, and how much, if this contract zoning is approved"?

2. **Blasting**

a. Our home is within 1,000 feet of the Dragon site. In July 1998, after they blasted at Phase 2 of Ocean Woods, we noticed two of the cross support beams in our atrium had moved (*see photos attached*). One beam moved approximately one inch after the blasting occurred across the street. We have had difficulty getting any satisfaction with the builder or his insurance company, some two years later. This was surface blasting for foundations. Our house, as do most houses along this stretch of Ocean Avenue, sits on ledge. We cannot get access to Natural Gas in this section because, as we were told at the time by Northern Utilities, there was too much ledge along Ocean Avenue. They stopped their pipeline where Wellstone ended.

b. The land adjacent to our home and the Dragon Products sites (CBL #416-A-21 and 6 and 7) has been considered for residential development several times in recent years but never seriously because it is almost all ledge.

c. Our house sits on ledge. We know it because when we expanded the house we had to shorten one room by two feet because we ran into the foot of

the ledge outcropping. In another room we had to lower the ceiling height because we couldn't dig down any further after hitting ledge.

d. There is a granite ledge hill barely covered with topsoil and vegetation (with exposed ledge outcropping) between our site and the Dragon quarry.

e. We believe that an independent engineer representing our neighborhood should be consulted (at Dragon's expense) to evaluate on our behalf what the complications might be if that 90 foot high quarry wall is blasted continuously, 20 times a year for the next 20 years. The City would be wise, in our opinion, to consider an independent engineering opinion as to what the likely impact will be to homes from drilling and blasting. It does not appear from attending the City Workshop that the Planning Board has taken into consideration the effects of blasting on this granite hill.

### 3. Traffic Concerns

Dragon has said that a few years ago they were mining 40,000 yards a year at the Ocean Avenue site and now are at 100,000 yards a year. In an expansionary economy, and since they desire to expand, it doesn't seem logical that the truck traffic that will be reduced to go and get the raw product won't more than be offset by the larger volume of truck traffic that will deliver more finished product. Is there a good reason why Dragon cannot be made to traffic over Presumpscot Street, which is an industrial zoned area already? It is actually a shorter route to I295.

### 4. Appearance

The Planning Board feels that the changes Dragon plans to make along its frontage will be an improvement. That is easy enough to represent, but historically the breakdown has been maintenance as they do let things run down (*see attached photos*). Concrete block barriers, corrugated metal walls, unkempt frontage has made for ugly frontage, and in time, will probably be ugly again.

### 5. Real Estate Taxes

Dragon currently pays under \$37,000 a year in real estate taxes to the City of Portland (\$36,998). Ocean Woods Phase I and II pays approximately \$62,000, and Summer Place pays approximately \$75,000. Add to these, Wellstone, Briarwoods, Pheasant Run, Ledgewood and individual owners along Ocean Avenue and you'll easily hear the voices of an estimated \$400,000 tax paying people who don't like this idea.

Joseph E. Gray, Jr.  
July 18, 2000  
Page 4

In closing, please listen to the local neighborhood. Why has a Spanish-owned, European publicly-traded, multi-national corporation gotten so far along with a contract zone request that should never have even been considered??

We respectfully request that after listening to this neighborhood and upon further review the Planning Department recommend this contract zone request be disapproved.

Sincerely yours,



Richard M. Perkins



Mary H. Perkins

RMP/MHP:lmh

- Enclosures:
1. Photos - beam movement from blasting at 794 Ocean Avenue
  2. Photos - of the present Dragon Products frontage

KELLY, REMMEL & ZIMMERMAN  
ATTORNEYS AT LAW  
53 EXCHANGE STREET  
P.O. BOX 597  
PORTLAND, MAINE 04112-0597

JOHN N. KELLY  
U. CHARLES REMMEL, II  
BARRY ZIMMERMAN  
GRAYDON G. STEVENS  
R. TERRANCE DUDDY  
RICHARD W. MULHERN  
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E-MAIL ADDRESS  
admin@krz.com

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www.krz.com

June 27, 2000

*Hand Delivered*

Mr. Joseph Gray, Jr.  
Portland Planning Board  
Portland City Hall  
389 Congress Street  
Portland, Maine 04101

Re: Dragon Products

Dear Mr. Gray:

On behalf of our client, Scott Cohen, I write to advise that our client is supportive of Dragon's proposal being considered this afternoon. I enclose a copy of the letter Mr. Cohen wrote to Dragon in August of 1998. The underground water issue is no longer of concern. Thank you for bringing my client's support of this proposal to the Board.

Sincerely yours,

  
Barry Zimmerman

BZ/pp  
cc: Scott Cohen

Scott Cohen  
P. O. Box 9715-350  
Portland, Maine 04104-5015

August 7, 1998

Dragon Products Co., Inc.  
38 Preble Street  
Portland, ME 04101

Re: Blasting Near Pheasant Hill, Portland, Maine

Dear Sir or Madam:

My name is Scott Cohen and I am the owner of Lots 23, 24 and 25 in the Pheasant Hill subdivision in Portland near your Ocean Avenue facility. It is my understanding that you are seeking approval of local and state officials for an extension of your blasting program for that facility. As one of the owners of the largest tract of land near your site (approximately 12 acres) I wanted to share with you my thoughts and comments regarding your proposed blasting.

As a general matter, I would support blasting as I do any reasonable effort at responsible commercial activity and I plan to publicly support your project. As I have reviewed the scope of the intended blasting, several matters have arisen which are of concern to me. First, it would be my hope to limit blasting to the time period of 9:00 a.m. to 5:00 p.m. on week days. Second, I am concerned with the possibility of structural damage to my house from the blasting and I wonder if it would be wise to obtain a structural survey of my house to give a benchmark to insure that the blasting does not result in any structural damage to the building. Finally, I am concerned about the issue of underground water. I would like to have this issue addressed by appropriate pre-blast testing. Since it is my intention to have my home serviced by an underground private well, the testing would necessarily involve both quantity and quality of water. I would welcome your input as to ways we can insure that the water quality and quantity will not be adversely effected by the blasting.

It may be that as you proceed, I can be of some assistance in demonstrating some public support by abutting land owners for your proposed project. If that is the case, please let me know. I would also appreciate it if you could have someone contact me to discuss my concerns and to inform me as to your present plans related to blasting.

I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink that reads "SA Cohen". The signature is written in a cursive, flowing style.

Scott Cohen

May 29, 2000

Joseph E. Gray, Jr.  
Director of Planning and Urban Development  
City Hall, 389 Congress Street  
Portland, Maine 04101

Dear Mr. Gray:

As residents of Summer Place, a 20 lot subdivision across the street from Dragon Product's Plant on Ocean Avenue, we are writing to object to their request to rezone their property under a contract zoning agreement to allow expansion of the area permitted for mining and processing operations. When we built our homes, we all understood their current operation to be a non-conforming use. Further, we all recognize they have a legal right to continue processing operations and we all understood and accepted that at the time our neighborhood was permitted and developed. We are strongly opposed, however, to any expansion of this facility and any resumption of mining operations, which ceased many years ago, for the following reasons:

1. The parcels acquired in 1962 and 1985 were known to be zoned R3 and purchased on speculation.
2. Expansion of a non-conforming use is, and should be, prohibited.
3. Mining in an urban setting is incompatible with high residential density.
4. The proposed use exceeds industrial zoning performance standards (noise, vibration, etc.) in a heavy impact industrial zone, which is exacerbated in a residential setting.
5. The proposed rezoning is inconsistent with the planning board approval of high density residential developments in the past decade, including two recently approved Phase II Expansions at Ocean Woods and Wellstone:

Summer Place  
Ocean Woods Phase I and II  
Wellstone Phase I and II  
Briarwood

6. Property Owners in these neighborhoods as well as other homeowners along Ocean Avenue in both directions will suffer adversely in many respects:
  - a. The quality of life in these city neighborhoods (due to noise, vibrations, drilling, blasts, expanded extraction operations and the like) will deteriorate significantly and measurably.
  - b. Property values will decline significantly resulting in an enormous aggregate loss to property owners (and, ultimately, the City of Portland in terms of valuation for tax purposes).

In summary, we do not believe the Planning Board of the City of Portland should allow the expansion of this non-conforming use with such an intensely industrial impact in such close proximity to residential subdivisions permitted and approved by the same Planning Board within recent years. We strongly believe the negative impacts of the proposed rezoning far outweigh and exceed any proposed benefits in the proposed agreement. We, therefore, urge the Planning Board to deny this requested zoning change.

Sincerely,

Charles Vandell  
Susan Vandell  
51 Summer Place

H. L. Williams  
Susan L. Taylor  
5 Summer Place

John Schiff  
45 Summer Pl  
Michael Tomlin  
Laura Sosnowski  
91 Summer Place

Chris Pugh  
31 Summer Place

Claude Cetaso  
17 Summer Place

Joanne Hale  
67 Summer Place

4076  
477 Summer Place  
Karen Tuffs  
69 Summer Place

Stephen J. Mon  
Denise J. Norpeter  
29 Summer Place

John Futum  
Lynn Futum  
21 Summer Place

John K. Kallman  
61 Summer Place

Elizabeth H. Foley  
73 Summer Place

Mildred J. Donohue  
25 Summer Place



Feb. 21, 1978  
474 Presumpscot St.  
Portland, ME 04103

John Carroll, Chair  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress St.  
Portland, ME 04101

Dear Mr. Carroll:

This letter is in regard to the request of Dragon Products Co. to have the property they own on Ocean Ave. rezoned from R3 to a contract zone to be known as Dragon Industrial Zone.

Although this letter is too late for the workshop discussion I would like it to be a part of the package for your deliberation at the public hearing that is sure to be scheduled in the future.

Dragon Products Co's Ocean Ave. business is a non-conforming use in a R3 zone. Being a heavy industry type of operation are they obliged to adhere to the cities IH zone requirements? If so have they been in compliance with them? Who has been monitoring the situation for the city? What have been the conclusions of the monitoring reports, if any? These are important questions to be answered if you grant their request for a change of zone because they will then come under the requirements of the MDEP plus the cities IH, and the rules will be more stringent.

The few trucks that haul in material for the manufacture of concrete are certainly far less of an annoyance to the neighborhood than the drilling, blasting and crushing of rock will ever be. We are well aware of the noise, vibration and dust created by this process.

It is easy to promise that there will not be a problem with this process due to the new innovations of equipment and methods used in performing these three functions plus the strict regulations of the MDEP. Without diligent and strict monitoring of the whole operation promises are easily forgotten and left far behind.

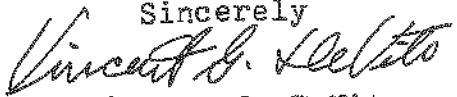
Regarding the measurement of noise, Portland's IH guidelines call for the meter to be located 4' above the ground. The one time I saw the companies sound engineers take a reading they had the meter on the ground. Would the ground muffle the sound so they got a false, low, measurement? Did they take all their readings in this manner? Probably. So were all their readings lower than the actual noise level? Probably.

There is also the problem of the frontend loader working, occasionally at 5:00 to 5:30 in the morning loading the conveyer belt system that carries material up into the building. Portland's noise level for this early hour is 50dB, I am sure this machine makes much more noise than that.

The idea of Dragon Co. wanting to expand operations into the area that was never a part of the original non-conforming use area is unacceptable to the neighborhood.

We strongly object to this zone change request.

Sincerely

  
Vincent G. DeVito

# Chris and Cathy Brigham

31 Summer Place, Portland, ME 04103  
207-879-5400, FAX: 207-874-9896

John Carroll, Chair  
Planning Board of the City of Portland  
4<sup>th</sup> Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

RE: Request by Dragon Products for Rezoning

Dear Mr. Carroll:

This letter is in regards to the request by Dragon Products Company to rezone property designated R-3 as a contract zone. Their request is not in the best interests of the City of Portland or the surrounding community. Dragon Products Company was knowledgeable of the zoning issues when they purchased the property. It is unfair to the surrounding community for them to want to change the situation because it would be more economical for them to blast gravel then transport gravel in.

We live off of Ocean Avenue in the vicinity of Dragon Products. Therefore, we are both residents and tax payers. In addition, I (Chris) serve as President of the Summer Place Homeowners Association. When we moved to the area we recognized that Dragon Products Company was our neighbor and accepted this as reality. We understood that they were permitted to utilize certain property zoned as R-3 for a non-conforming use. We also understood that they had not blasted for several years and there were no intentions to blast in the future. The mining portion of their business was inactive, and the original property had been quarried. We also recognized that only a portion of the R-3 property which Dragon Products had purchased from Cook was permitted to be used for non-conforming purposes.

Our "eyes were open" when we moved to the area. However, we have been concerned by other issues, including: extended hours of operation, noise levels (which at their property boundaries is in excess of the levels established for medium intensity Industrial Zone), the frequent travel of concrete trucks down Ocean Avenue (resulting in both noise and road damage), and the frequent blockage of Ocean Avenue (Route 9) by large transport trucks (at the turn in the road near their entrance). We certainly are not asking them to leave, although we do have these concerns.

A major concern at that this time is their desire to change the situation. Although they articulate a position that this would ultimately benefit the surrounding community, we strongly disagree. In reviewing their application, we note major concerns:

- Their request would expand the use of the “non-conforming” property, even though it would be redefined as a “contract zone.” This is inconsistent with an intent to reduce the extent of “non-conforming” property.
- It is inconsistent with the best interests of the City of Portland and the surrounding community. It also appears to be inconsistent with your long term planning for business development within the City and the potential for recreational use of the land which previously served as the City of Portland landfill.
- It would appear that the operation would need to expand beyond its current scope in all phases for it to be economically viable.
- Processing of blasted rock into usable sized gravel alone would greatly increase noise and dust from the operation.
- As outlined above there are concerns about their existing operation.

We hope that the Dragon Products Company realizes the realities of its current situation as we recognize the realities of ours. We accept them as a neighbor, however as with all neighbors want them to be a “good neighbor.” We do not them to “change the rules,” which we had all accepted, merely because it would be to their financial advantage to do so. Their requested changes would not benefit the surrounding community nor the City of Portland. We would welcome the opportunity to meet with the Planning Board and to express our concerns.

Sincerely,



Christopher R. Brigham



Cathy V. Brigham

cc: Sara Hopkins, City Planner  
John Bannon

Elizabeth Foley  
Klaus-Peter Voss  
73 Summer Place  
Portland, ME 04103  
February 3, 1998

John Carroll, Chair  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress Street  
Portland, ME 04101

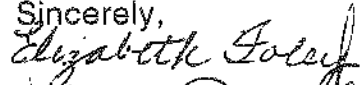
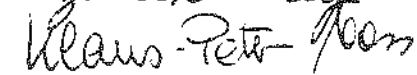
Re: Dragon Products Company's Request for Re-zoning

Dear Mr. Carroll:

We are writing this letter with reference to the plan of the Dragon Products Company to re-zone property that is presently defined as R-3 and are taking this route to express our concerns and adamant opposition. As immediate neighbors of the quarry we will be directly effected by the proposed changes in - as we believe - negative ways. To expect us to simply live with the environmental impact that the planned blasting operation will have on our property in terms of noise development and air quality for example is unreasonable. In addition to that there are still a lot of unanswered questions - despite Dragon's positive PR efforts and willingness to listen to us - in regards to the longterm seismic impact of the blasting operation on the foundation of our house.

When we bought the property and then moved into our house about a year and a half ago, we were fully aware of the presence and close vicinity of the Dragon quarry and accepted that as fact and reality. It was our understanding, however, that the Dragon Products Company had not blasted for a number of years and that it did not have the intention to do so in the future. The mining parcel of the business appeared to be inactive and the original property had been quarried.

We urge you to take our concerns into consideration and deny the Dragon Products Company's request for re-zoning.

Sincerely,  
  


cc: Sara Hopkins, City Planner

John and Lenora Gutwin

Sunday, February 22, 1998

John Carroll, Chair  
Planning Board of the City of Portland  
389 Congress Street  
Portland, ME 04101

RE: Dragon Cement application for Zoning Amendment.

Dear Mr. Carroll;

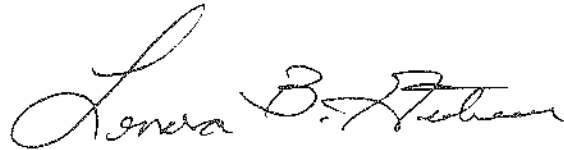
We are opposed to the proposal to rezone the R-3 property across the street from us. The activities planned for the proposed contract zone would most likely increase noise, dust and vibrations beyond acceptable limits. Even if Dragon Cement claims they will not, it is still likely that they will through negligence or accident. This expectation of noise, dust, and vibrations beyond acceptable limits is what is sure to diminish our property value in the adjacent residential zone.

Of course we agree that continuing a legal non-conforming use is fair. Expanding a non-conforming use is unfair and is counter one of the greatest benefits of zoning; planned, predictable development.

Sincerely,



John D. Gutwin



Lenora B. Gutwin

Attachment 10

Novotny and Morn

29 Summer Place

Portland, Maine 04103

February 14, 1998

Mr. John Carroll, Chairman  
Planning Board of the City of Portland  
4<sup>th</sup> Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

Dear Mr. Carroll:

We are writing in response to Dragon Cement's Application for Zoning Amendment.

We are new residents of Summer Place, a neighborhood community of 19 homes (20 home sites) situated diagonally across the street from Dragon Cement. Previously we were home owners and tax payers in the town of Freeport. We made a decision to relocate and make a home purchase in Portland, in spite of the fact that property taxes were considerably higher than in Freeport. Prior to purchasing our property we were aware that Summer place was rezoned in 1995 and the adjacent industrial use of the Dragon site. We were informed of this grandfathered non-conforming use, and did not object to it when we made our residential purchase. We do, however very strongly object to their request to commence mining (blasting) operations on R-3 zoned property. This property, to the best of our knowledge, has never been used as part of the manufacturing or mining operations of Dragon Cement and its predecessor. According to Dragon's own Plan Manager, Dave Grinnell, "Dragon knew there was some question as to this property's use" when they acquired the site in 1991. It appears that there may even be some question as to whether Dragon would be permitted to resume mining operations at its present quarry.

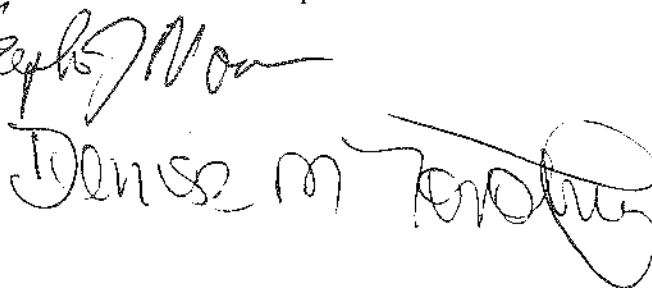
As a point of clarification, the Application states in Paragraph 3 that "Dragon's only goal in this application is to clarify that it may mine stone from its site to use in its concrete manufacturing process," but the application seeks much more than that with respect to noise levels and the like. In fact, by its own admission the company is currently in violation of zoning standards for noise levels (76 decibels versus the highest allowable standard of 75 decibels for IH). Another misrepresentation in the application is the assertion in Paragraph 2 that the only opposition that "surfaced during that process was opposition from Summer Place residents." In fact, other abutting neighbors opposed this application too, as the record will clearly show.

In summary, we understand Dragon's right to continue their manufacturing operation on the present site as a legitimately grandfathered, non-conforming use - we made a decision to purchase our home and relocate in spite of their operation. We do not believe that gives them the right to rezone the adjacent property from R-3 to Contract Zoning, which would permit blasting and all that entails in terms of safety, noise, vibrations, dust, etc. We strongly oppose this proposition.

Thank you for your sincere consideration of our position.

Sincerely,

Stephen J. Morn  
Denise M. Novotny



# MAINE MEDICAL CENTER

## RADIATION ONCOLOGY DIVISIONS:

*Southern Maine  
Radiation Therapy Institute*

22 Bramhall Street  
Portland, Maine 04102-3175  
(207) 871-2276  
FAX (207) 871-6069

*MMC - Scarborough Campus  
Radiation Therapy*

Unit 101  
100 U.S. Route. 1  
Scarborough, Maine 04074-9308  
(207) 885-7500  
FAX (207) 885-7525

*Coastal Cancer  
Treatment Center*

205 Congress Avenue  
Bath, Maine 04530-1531  
(207) 443-5866  
FAX (207) 871-6770

February 5, 1998

John Carroll, Chair  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

Dear Mr. Carroll,

I am writing this letter in response to the Dragon Cement Company's request to change the current status of the R3 zone that the company owns.

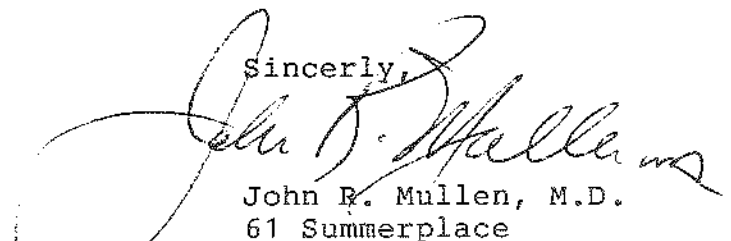
I reside in Summerplace, which is a pleasant neighborhood of 19 families. It is directly across from the area that Dragon now wants to blast in. Although all of us knew prior to purchasing our homes that Dragon Concrete had a grandfathered non-conforming use for their current mining site, we were not prepared to accept further extension of that non-conforming zone to land obtained by Dragon in the 1980's. I strongly object to any change in the current status of the land in question.

Noise levels and dust levels will increase, not decrease as a spokesman from Dragon claims. The company is already in violation of current noise levels by their own admission. Furthermore to make their operation economically feasible, Dragon would have to expand all aspects of their operation. This would further increase dust and noise levels.

I hope that the Planning Board in their review of the proposed change can see the difficulties and ambiguities in the plan proposed by Dragon. If the change is approved it will only make the community worse more than better.

Thank you in advance for your consideration of our position.

Sincerely,



John R. Mullen, M.D.  
61 Summerplace

22 Bramhall Street, Portland, Maine 04102-3175

A member of the MaineHealth family

A Teaching Hospital of the University of Vermont College of Medicine



Tuesday

20th February 1999

410 Resumpore Street

Parcels

Ms 04103

Dear Mrs Gray!

Re: Dragon Cement

As it appears the Public may not be allowed to voice their comments at the meeting, I should like to make mine known on paper.

The Delittos & I have worked long & hard to retain this area as a R-3 Zone & we are very concerned that Dragon Cement should rear their head again to try change things.

It is not stated exactly what they have in mind, however, I would vehemently oppose any change that might create a health hazard or even jeopardize <sup>part of</sup> my home in future if necessary.

So I would say to the Planning Board, please give some thought to the long term residents & the owners of the beautiful new homes on Ocean Avenue & not to the mighty Dragon.

Sincerely  
Margaret Brown (2002)

Mike and Sue Yandell  
51 Summer Place  
Portland, Maine 04103  
Tel. 207-761-4678

January 20, 1998

Mr. John Carroll, Chairman  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

Dear Mr. Carroll:

We are writing in response to Dragon Cement's Application for Zoning Amendment.

We reside in Summer Place, a neighborhood community of 19 homes (20 home sites) situated diagonally across the street from Dragon Cement. As noted in the application, Summer Place was rezoned in 1995 and "at the time, everyone was fully aware of the adjacent industrial use on the Dragon site." Yes, we were aware of this grandfathered non-conforming use, we did not find it objectionable then and we do not object to it at present. We do, however, strongly object to their request to commence mining (blasting) operations on R-3 zoned property acquired in the 1980's, which is not part of the property grandfathered as a non-conforming use. This property, to the best of my knowledge, has never been used as part of the manufacturing or mining operations of Dragon Cement or its predecessor. According to Dragon's own Plant Manager, Dave Grinnell, "Dragon knew there was some question as to this property's use" when they acquired the site in 1991. At least this is what he said at a meeting with abutters in December 1997. (There may even be some question as to whether Dragon would be permitted to resume mining operations at its present quarry, but then we are not lawyers.)

As a point of clarification, the Application states in Paragraph 3 that "Dragon's only goal in this application is to clarify that it may mine stone from its site to use in its concrete manufacturing process," but the application seeks much more than that with respect to noise levels and the like. In fact, by its own admission the company is currently in violation of zoning standards for noise levels (76 decibels versus the highest allowable standard of 75 decibels for IH). Another misrepresentation in the application is the assertion in Paragraph 2 that the only opposition that "surfaced during that process was opposition from . . . Summer Place residents." In fact, other abutting neighbors opposed this application too, as the record will clearly show.

In summary, we understand and respect Dragon's right to continue their manufacturing operation on the present site as a legitimately grandfathered, non-conforming use. We do not believe that gives them the right to rezone the adjacent property from R-3 to Contract Zoning, which would permit blasting and all that entails in terms of safety, noise, vibrations, dust, etc.

Thank you for your earnest consideration of our position.

Sincerely,

*Howard Handell*

*Mike Yandell*



**CITY OF PORTLAND, MAINE  
MEMORANDUM**

**TO:** Chair Carroll and Members of the Portland Planning Board  
**FROM:** Sarah Hopkins, Senior Planner  
**DATE:** May 9, 2000  
**RE:** Dragon Products Proposed Contract Zone

**I. Introduction**

Dragon Products has requested a workshop with the Planning Board to reopen the contract zoning proposal to allow an enlargement of the area permitted for extraction and mining of stone at its plant on outer Ocean Avenue, currently a non-conforming use in the R-3 zone.

The Dragon Products lot is 38.4 acres and is zoned R-3 Residential.

The contract for rezoning, as proposed by the applicant, includes in addition to an enlarged area for extraction and mining of stone, the relocation of the rock crusher, concrete plant, storage silos and associated equipment to the rear of the site. The applicant also proposes to construct a berm along the Ocean Avenue frontage of the site and to preserve a natural buffer around the mining area.

**II. History**

**A. ICPAC**

Approximately four years ago, the applicant participated in the Planning Board's review of the Industry and Commerce Plan Advisory Committee recommendations regarding the industrial zoning text and map changes and overall policy discussions. At that time, Dragon requested that the City rezone their parcel to the IH zone and allow mining and extraction within the IH zone. During the public hearings, a number of neighbors raised concerns regarding Dragon's request to be a permitted use at that site, and the impact of such a use.

Due to the number of issues raised and the policy considerations which must be discussed, the Planning Board decided to leave the site zoned R-3, and asked the applicant to return at a later date to resume the policy discussions. Leaving the site zoned R-3 allows the plant to continue as a nonconforming use but restricts any expansion of the use.

**B. Site History/Operations**

The Dragon Products site consists of a stone quarry and concrete manufacturing plant. These uses have been located at this site since 1934, yet have been zoned R-3 Residential since the first zoning in Portland in 1958.

Mining has occurred on and off at the site over the last fifty years.

The manufacture of concrete is a process in which stone, cement, and water are mixed.

Currently, both mined stone and cement are brought to the plant to be mixed with water. From there, the concrete is trucked to construction sites. According to the applicant's submission, an average of 13 to 26 trucks haul stone from April to November, creating 26 to 52 daily trips on Ocean Avenue (in/out).

The applicant has submitted a history of the land acquisition, uses, and ownership of the Ocean Avenue properties from 1932 to 1991. (See Attachment 5.) To summarize, the original 12.5 acre parcel was purchased in 1932. In 1937, 1962, and 1985, more property was purchased along Ocean Avenue, south of the original parcel.

From aerial photographs, it appears that most of the property purchased in the 1930's and 1960's has been mined. The remainder of the parcel which has not been mined and is now proposed for mining was purchased in 1985.

### III. Policy Issues

Before discussing the various points and issues raised by the proposed contract, the Board may wish to revisit the policy issues associated with Dragon's proposal to expand it's operation. Below are a number of topics that have been raised by the Planning Board and City staff during the review to date of the proposal.

#### 1. Should mining be allowed in the City of Portland?

There have been several arguments on either side of this question during the review of this proposal. One argument reasoned that since Portland is a consumer of Dragon's product through construction, the City should allow the use within its boundaries. The other side of the argument is that this use is incompatible or inappropriate for an urban setting because of its very nature, i.e. the direct impacts of quarrying (blasting, crushing and hauling of rock) and because it "consumes" valuable urban land and leaves a problematic land residual in the form of an abandoned quarry site.

#### 2. Benefits vs. Costs

As the applicant states, there are several benefits to allowing a mining use at the Dragon site. Dragon anticipates the reduction of approximately 7000 truck trips annually. These trucks currently bring aggregate stone and cement to the plant to be mixed with water and made into concrete. By mining stone on-site, those aggregate trips will be eliminated, at least as long as the on-site stone supply lasts. Once the stone is consumed, aggregate will again be brought to the site.

This contract would also require the relocation of the plant and associated infrastructure to the rear of the site, and will require the construction of the berm and drainage infrastructure along Ocean Avenue. The change along Ocean Avenue will create a benefit for the neighborhood, compared to the current operation.

There are also costs to consider. The mining operation will exceed the industrial zoning performance standards related to noise and vibration in a heavy impact industrial zone. Our zoning standards were specifically written to prohibit uses which would exceed those standards.

It is difficult at this point to determine the costs relative to property values for developed and undeveloped land in the vicinity. Will the benefit of relocation of the plant and the improvements along Ocean Avenue cancel out the negative impacts to neighbors nearby? Is it an even trade? How much of a buffer is required to allow nearby residential development? Will the quarry expansion make the abutting residential zoned land unsuited for residential development? If so, what other land use might be suitable adjacent to the quarry operation?

### **3. Dragon's Land Purchase**

As indicated by the applicant's analysis of the history of the property, land was purchased by the Cooks (previous owner) for the mining of stone and manufacture of concrete after the property was zoned residential. In fact, the property now proposed for rezoning to mine was purchased speculatively in 1985.

The City of Portland has been consistent in its policy of keeping this parcel zoned residential. Regardless of this policy, the applicant and their predecessor has continued to annex additional property along Ocean Avenue.

### **4. Residential vs. Industrial Zoning**

Approximately seven years ago, the Summer Place parcel was rezoned from industrial to residential in response to the trend for more low intensive, residential uses along Ocean Avenue. A number of condominium projects were approved in the 1980s and 1990s consistent with that trend: Ocean Woods; Wellstone; and Briarwood. The Planning Board has approved two phase II projects along Ocean Avenue: Ocean Woods and Wellstone.

### **5. Reclamation**

Once the area proposed for rezoning is mined, there will presumably be no more mining on the site. The applicant is clear that the manufacture of concrete will continue indefinitely at the site and that according to the DEP requirements there will be some reclamation of the site. DEP reclamation requirements are minimal safety requirements.

How many years worth of aggregate will be mined from the additional property? Should the blasting be considered a temporary effect? What, then, is the long-term impact? If blasting is temporary, so is the reduction in truck traffic from consuming on site aggregate material.

What are the reclamation plans for the site? The Board may wish to require a master plan for the quarry site as part of the contract for rezoning. Reclamation to state standards would not be sufficient in the City. What use would be possible in the quarry if concrete production ceases? Will there be any organic soil that would support vegetation or would the site remain barren after abandonment?

**6. When would blasting be permitted?**

The proposed contract indicates that the blasting could commence upon approval of the contract, however the applicant would have five years to complete the improvements. The Board, if it recommends the rezoning, might consider some level of immediate improvements to improve compatibility of this use to the surrounding neighborhood.

**7. Truck Route**

The board might examine the truck route employed by Dragon at present. If the majority of trucks utilize Ocean Avenue, a residential arterial instead of Presumpscot Street, a more industrial roadway (albeit with a school), perhaps an access management plan could be considered in the contract rezoning.

**IV. Proposed Contract for Rezoning**

Listed below are the conditions as proposed by the applicant. We are showing a redlined version to indicate those areas that may need further discussion. A complete draft of the contract is included as Attachment 3.

1. The CITY shall amend the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by 14-49 of the Portland City Code, by adopting the map change amendment shown Attachment 1.
2. The property ~~shall~~ may be developed substantially in accordance with the site plans and elevations shown on Attachment 2; including relocating the concrete plant, storage silos, and rock crusher, provided, however, that such plan and elevations development shall be subject to full site plan review by the Planning Board, if required by City ordinances.
3. DRAGON shall be authorized to establish and maintain only those uses or any combination of the uses listed below:
  - a. Mining and crushing of stone for use in manufacture of concrete on the site, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth herein and established by State and Federal law.



- b. Concrete manufacture and processing.
- c. Outdoor storage of materials utilized in the concrete manufacturing allowed on the site, material manufacture on the site (including concrete blocks produced as an incidental part of its operations) and related machinery and equipment, provided that such storage is limited to the areas shown on Attachment 2. Rock storage shall be relocated from its current site to the areas shown on Attachment 2.
- ~~d. The buffer strip shown on the proposed site plan shall remain in its existing natural condition.~~
- 4. Prior to the commencement of any mining, Dragon shall obtain from the City a Certificate of Occupancy, verifying that the site alterations of the project as approved by the Planning Board, including the relocation of the concrete plant and the removal from the site of old, unused equipment and buildings, etc. have been completed to the satisfaction of the City in accordance with this Agreement.
- 5. If the Certificate of Occupancy is not issued within five (5) years of the date of final site plan approval by the Planning Board, this rezoning agreement shall automatically terminate and the land shall automatically revert to the R-3 or any successor zone classification.
- 6. **DRAGON** shall construct the densely a vegetated berm and fencing along that portion of the property abutting Ocean Avenue, as indicated on Attachment 2.
- 7. The natural vegetation existing in the Permanent Buffer Zone along the perimeter of the property proposed quarry expansion shall remain in its natural state, as indicated on Attachment 2. This area, or any portion of it, may not be separately conveyed apart from the property as a whole.
- 8. ~~**DRAGON** shall address to the satisfaction of the Planning Department and Public Works, the existing substandard stormwater condition on Ocean Avenue adjacent to its parcel; including building an adequate drainage ditch along Ocean Avenue; and shall thereafter confine surface water runoff within its site. Pavement and stormwater infrastructure along Ocean Avenue and adjacent to this site parcel shall be repaired and maintained by DRAGON as required by Public Works.~~
- ~~9. DRAGON shall relocate the rock crusher from its current location to the rear of the site, as indicated on Attachment 2~~
- 10. **DRAGON** shall relocate the entrance/ingress/egress driveway to the premises, and shall create a slip lane for slow moving traffic along Ocean Avenue as indicated on Attachment 2. [see site plan]
- ~~11. DRAGON shall relocate the concrete batch plant and the conveyor belt to the concrete batch plant to the rear of the site, as indicated on Attachment 2, within five years of the date of this Agreement.~~
- ~~12. DRAGON shall relocate the silos to the rear of the site, as indicated on Attachment 2.~~

- ~~139.~~ **DRAGON** shall limit the total number of blasts on the site to a maximum of twenty (20) individuals blasts per year. In no event shall more than ~~threefour (34)~~ individual blasts per month be permitted. All blasting on the site shall occur on Monday through Saturday between the hours of 7:00 a.m. and 4:00 p.m. and between the months of March and November.
- ~~14.~~ All mining operations on-site shall be conducted within the building envelope indicated on Attachment 2.
150. **DRAGON** shall hose down trucks ~~on the at the rear of~~ before exiting the site to reduce the amount of debris and residue tracked on the street.
161. **DRAGON** agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including but not limited to blasting and reclamation, as set forth in 38 M.R.S.A. 490-W to 490EE, attached hereto and incorporated herein, except, where municipal standards adopted by the CITY are more restrictive, the CITY standards shall apply.
172. Reclamation shall be completed substantially in accordance with the reclamation plan as indicated on Attachment 3; provided, however, that such plan shall be subject to full review and approval by the Planning Board if required by City ordinances.
183. **DRAGON** shall meet all standards contained in sections 14-265, 14-266, and 14-267 of the Portland City Code, except as follows:
- a. No new fence shall be required pursuant to 14-266(6) except as shown on Attachment 2 as may be required by the Planning Board during final site plan review.
  - b. Outside storage of stone shall not be required to meet the standards of 14-266(10).
  - c. Vibration standards in 14-267(3) shall not apply to blasting.
  - d. Noise standards in 14-267(2) shall not apply to blasting.
  - e. The existing concrete plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is relocated, but shall be limited to 65 decibels of noise as measured at property lines in accordance with the procedures set forth in 14-267(2).
194. Until it has relocated the concrete plant, **DRAGON** shall maintain ownership of all property currently owned by it at this site and also the parcels owned by Dragon and located across Ocean Avenue from this site, more particularly described as Tax Map 418, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.
- ~~20.~~ This contract shall automatically terminate upon the conveyance of this property by **DRAGON** to another owner or entity and the area shall automatically revert to R-3 or any successor zone classification.

**V. Staff Review of the Contract**

Corporation Counsel is currently reviewing the proposed changes to the contract and will discuss with the Board any issues to consider during the workshop. A couple of items to consider, though, are the need for a reclamation plan, and the proposed process to follow in the case of breach of contract.

**VI. Dragon Products Noise Study**

Dragon Products has commissioned a noise study of the plant and surrounding area. (See Attachment 8.) The study found that when the plant was not in operation, the noise level ranged from 62.6 to 66 dB. These readings were taken from a location directly across Ocean Avenue from the plant entrance. Hourly measurements ranged from 51.0 to 77.9 dB. Measurements collected around the perimeter of the quarry were all below 60 dB. A table of noise measurements are included with the report.

The study found that at times, the noise level across Ocean Avenue can be higher than levels within the quarry, given the amount of traffic along Ocean Avenue. The noise study did find that the noise standard was exceeded twice during the testing at the Ocean Avenue property line and across Ocean Avenue from the plant.

**VII. Vibrations from the Plant**

As the Board may recall, the standards for vibration differ between our local ordinance and the DEP standard for quarries. The applicant has worked with engineers to quantify and compare these standards. A comparison is included as Attachment 6. A narrative comparison is included as Attachment 7: A cork is bobbing on a lake; a stone is thrown into the lake; the distance that the cork bobs up and down is the Portland standard; and the speed at which the cork bobs up and down is the DEP standard.

**VIII. Site Plan**

The site plan proposed by the applicant will include shifting the rock crusher and aggregate stockpiles to the rear of the site, approximately 400ft northwest of present location. At the last workshop, the applicant had said that the rock crusher would be enclosed. The batch plant and silos would also be moved from the front of the site along Ocean Avenue to the rear.

Additionally, Dragon plans to change its access to the site by consolidating its driveways to one main entrance along the northern property line of the parcel. The brick truck garage and its driveway would remain in its present location on Ocean Avenue but would no longer be connected physically to the plant or its operations.

As part of the reconfiguration, Dragon proposes to make improvements along Ocean Avenue, including the construction and landscaping of a berm along Ocean Avenue and the widening of Ocean Avenue to include a ramping lane for truck exiting the site and moving south along Ocean Avenue.

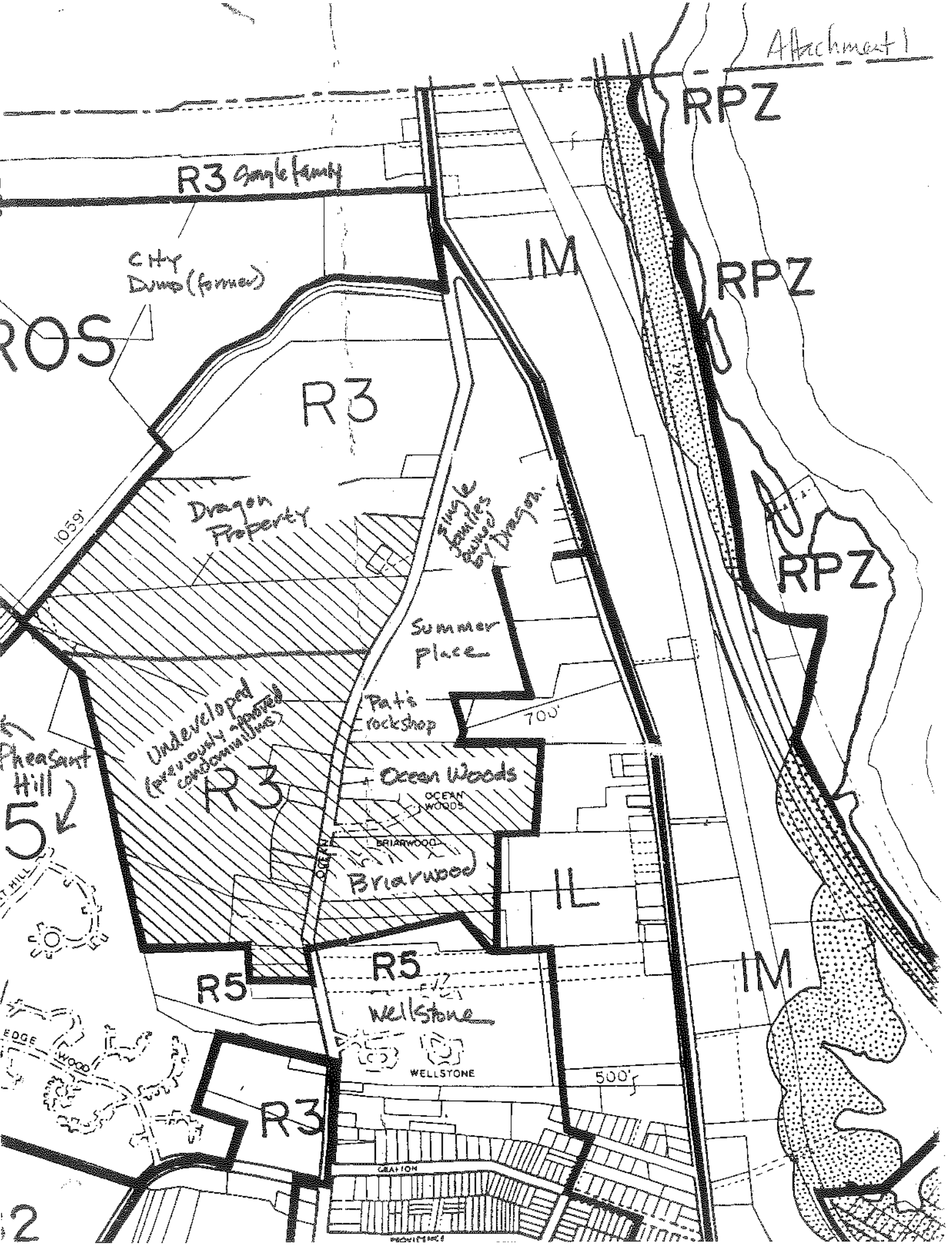
As a condition of the contract, the improvements will be completed within 5 years of approval of the contract. If the improvements have not been made, the zoning will revert to R-3. The five year timeframe continues to be an issue for discussion.

## **IX. Next Steps**

At the last workshop, the Board asked for engineered site plans indicating existing and proposed topography, drainage, landscaping, parking, circulation, buildings, and quarry reclamation. The Board may wish to give additional direction to the applicant as to the sufficiency of the site plan and the contract proposal. Additionally, the Board may direct the Planning Office to retain a technical expert to advise on the Board on the more complex issues raised by this application.

### Attachments:

1. Vicinity Map
2. Contract Zone application
3. Proposed Contract Language
4. History of Dragon Application
5. History of Ownership of Site
6. Blast/Vibration Standards
7. Narrative Comparison of City's Vibration Standards and MDEP's Standards
8. Reclamation Narrative
9. Noise Study from 1997 w/Plan
10. Plan of Proposed Contract Zone Boundaries
11. Plan of Berm, New Operation Area
12. Cross Section of Site and Berm
13. Enlarged Plan of Berm and Entrance



DATE October 29, 1997

TO THE CITY PLANNING BOARD, CITY HALL, PORTLAND, MAINE 04101:

The undersigned hereby requests that you consider whether it would be consistent with the comprehensive plan of the City of Portland, Maine, and make appropriate recommendation for action by the City Council concerning the following proposed amendments to the Zoning Ordinance of the City of Portland, Maine:

A. ZONING MAP AMENDMENT:

FROM R-3 ZONE TO Contract ZONE

The property situated on Ocean ~~Street~~/Avenue between Presumpscot ~~Street~~/Avenue and Washington ~~Street~~/Avenue on West side(s).

Assessor's Reference (Chart, Block and Lot) for the property is as follows:

415-A-4, 8, 9; 416A-A-2; 417-A-4,5,10,11; and 418-A-1, 3, 4, 5, 6, 9, 10

1. What original deed restrictions, if any, concerning the type of improvements and class of uses permitted were placed on the property involved? Give date restrictions expire:

None

2. Description of the existing use of property: stone quarry and concrete manufacturing facility

3. Description of the proposed use of property: stone quarry and concrete manufacturing facility

4. Area of Lot(s): 38.4 acres

Total Floor Area: N/A

Street Address of Property Involved	Property Owner <del>and/or</del> <del>Name of Applicant/Holder</del>	Date of Acquisition
<u>960 Ocean Avenue</u>	<u>Dragon Products, Inc.</u>	<u>1991</u>

... of a zoning plan, as required in Article V of the  
Municipal Code.

7. Submission of plans and addresses of property owners abutting the subject property.

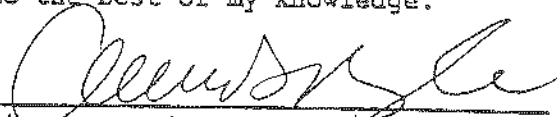
B. ZONING TEXT AMENDMENT:

1. Section of Ordinance to be amended: \_\_\_\_\_
2. Proposed text amendment - Attach on separate sheet the exact language being proposed, including existing relevant text, in which language to be deleted is depicted as crossed out (example), and language to be added is depicted with underlined (example).
3. Brief statement of the purpose of the proposed amendment.
4. If the amendment is intended to facilitate a development, reuse, alteration, addition or modification to a specific property, fill out the sections above under ZONING MAP AMENDMENT.

A fee for this application for a zoning amendment will be charged in accordance with Section 14-54 of the Municipal Code (see copy attached). The applicant also agrees to pay all costs of publication (or advertising) of the Public Hearing Notice as required for this application. Such amount will be billed to the applicant following the appearance of the advertisement.

The above information and the attached lists of property -- owners in the vicinity are true and accurate to the best of my knowledge.

October 29, 1997  
Date of Filing

  
\_\_\_\_\_  
Signature of Applicant/Attorney

Dragon Products Company  
\_\_\_\_\_  
Address of Applicant  
38 Preble Street, P.O. Box 1521  
Portland, ME 04104  
\_\_\_\_\_  
City State ZIP

WITHDRAWAL: In the event of withdrawal of the zoning amendment application by the applicant prior to the submission of the advertisement copy to the newspaper to announce the public hearing, a refund of two-thirds of the amount of the zone change fee will be made to the applicant by the City of Portland.

Portland Planning Board  
Portland, Maine

Effective: April 11, 1988

## DRAGON INDUSTRIAL ZONE

1. **Site History:** Dragon Products Company owns approximately 38 acres west of Ocean Avenue adjacent to the old City dump. This property appears on sections of Tax Maps 415, 416A, 417 and 418.

The Dragon Products Company site consists of a stone quarry and a concrete manufacturing facility, which have been operated continuously on the Ocean Avenue site since at least 1934. The site has been known as the Cook's Concrete Plant, and was purchased by Dragon in 1991. The manufacture of concrete is a process of mixing stone, cement and water.

The facility is assessed by the City Assessor at more than \$1,300,000 and generates about \$33,500 in annual real estate tax revenues for the City.

2. **City Zoning:** The site has been zoned R-3 since the City first adopted zoning, as shown on the 1958 zoning map attached. The facility has operated continuously as a non-conforming use since that time.

The City of Portland Comprehensive Plan, originally written in 1974, states that "Cook's Quarry, an extractive use, is presently located in the R-3 Residential Zone adjacent to the dump, and should be included in the expanded Industrial Zone."

The 1993 City Industry and Commerce Plan Advisory Committee (ICPAC) recommended that the City provide a number of incentives "to promote growth of the industry and commerce sector in Portland". The City followed up on the ICPAC report with a review and revision of its industrial zoning. Dragon Products participated in that process and presented proposals for a rezoning of its property as part of the overall industrial rezoning. However, the Planning Board decided that the issues surrounding this site were too complex to be dealt with as part of the overall industrial rezoning, and encouraged Dragon to make a separate application. The only opposition that surfaced during that process was opposition from the Summer Place residents. The Summer Place site is diagonally across the street on Ocean Avenue, and was rezoned from industrial to residential in 1995. At the time, everyone was fully aware of the adjacent industrial use on the Dragon site.

3. **Proposed Contract Zone:** Dragon's only goal in this application is to clarify that it may mine stone from its site to use in its concrete manufacturing process. An argument exists that it may mine this stone as a continuation of the operation of its non-conforming use, but Dragon would prefer to be in a zone where it is a permitted use. No change in its concrete manufacturing operations is planned.



As shown on the attached site plan, Dragon Products proposes rezoning most of its site from R-3 to what is described as a "Dragon Industrial Zone". Dragon proposes to leave some of its site zoned R-3, establishing a 275 foot strip of land along Ocean Avenue, a 200 foot wide strip along its neighbor to the southwest and a 100 foot wide strip adjacent to the former City dump property. The proposed zone would incorporate all standards of the existing IH Industrial Zone with the following exceptions:

a. Use: The new permitted use would be for "concrete plants, including mining of stone for use of manufacture of concrete on the site".

b. Maine DEP Standards: All provisions of the attached 1996 Maine DEP Performance Standards for Quarries would be incorporated into the new zone, replacing particular sections of the City of Portland IH Zone, including:

(1) Vibration limits would be as set forth in the Maine DEP quarry standards.

(2) Noise limits for the concrete manufacturing plant would be 78 decibels along Ocean Avenue and 65 decibels at other property lines. Noise limits for blasting would be as set forth in Maine DEP quarry standards.

These standards provide many protections for the neighborhood, including groundwater protection, natural resources protection, reclamation standards, and detailed requirements for blasting, including pre-blast surveys of nearby buildings. Dragon intends to comply with these MeDEP standards in all respects.

4. Technical Information: Dragon has obtained the following technical information to assist in the process:

Noise Study. A noise study conducted during 1997 is attached to this application. It is important to note that when the first noise measurements were taken, at a time when the plant was shut down, there was 66 decibels of noise measured directly across the street from plant and 62 decibels of noise at the nearest neighbor. The noise was generated almost exclusively by the road traffic on Ocean Avenue, also known as Route 9, a busy street even on weekends.

When the concrete manufacturing plant was in full operation, measurements were generally 65 decibels or less at all property lines. The only exception was on Ocean Avenue near the plant, where the decibels measured up to 76 when the plant was in full operation. Note that even when the plant was in full operation, the highest noise level at the Summer Place property was 63 decibels, less than even the IL industrial standards adopted by the City.

Truck Traffic: The primary source of noise and vibrations for neighbors in this operation is probably the trucks which go to and from the facility along Ocean Avenue. Generally speaking, there are trucks that deliver cement, trucks that deliver stone, and trucks that take the manufactured concrete from the plant to various job sites.

Allowing Dragon to continue mining its stone will reduce the traffic by reducing the number of trucks that need to haul stone to the site. During a typical concrete production season from April through November, an average of 13 to 26 trucks haul stone on a daily basis. That means a total of 26 to 52 daily trips on Ocean Avenue since its truck needs to deliver the stone and then leave. Allowing Dragon to mine stone from its site will eliminate these truck trips from Ocean Avenue while the mining operations are in progress, reducing noise and vibrations in the neighborhood at large.

5. Summary: The portion of the facility that manufactures concrete has been a continuous operation since the 1930's and will continue operating indefinitely into the future. Whether Dragon mines more stone from its site or not, this manufacturing facility will continue operating as long as there is a demand for concrete in the Greater Portland area. The rezoning will allow the facility to continue operating as a permitted use (as opposed to a non-conforming use) and will also allow Dragon to mine stone from its site in accordance with Maine DEP guidelines.

P:\CSNDRAGON\CONTRACT.ZNE

PROPOSED DRAGON PRODUCTS INDUSTRIAL ZONE

LIST OF ABUTTING PROPERTY OWNERS

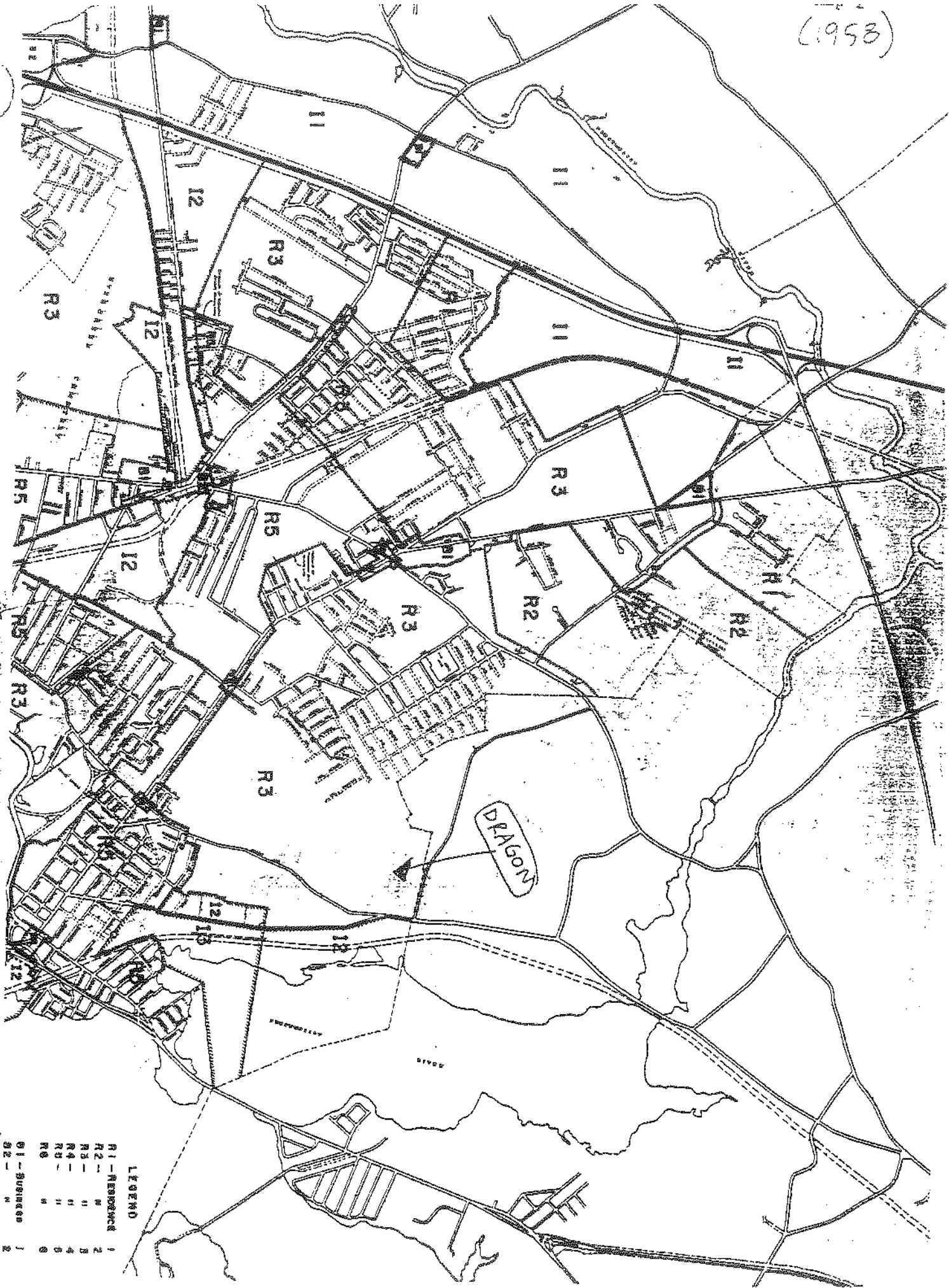
(according to City Assessor's records)

<u>OWNER</u>	<u>TAX MAP and LOT NUMBER</u>
City of Portland 389 Congress Street Portland, ME 04101	417-A-9
Cook Concrete 169 Portland Street Boston, MA 02114.	417-A-6 418-A-8 415-A-3 415-A-11
Patricia M. J. O'Rourke 852 Ocean Avenue Portland, ME 04103	416A-A-1 (848-858 Ocean)
Federal Deposit Insurance Corp. P. O. Box 1416 Portland, ME 04104	416A-A-3 (840-846 Ocean)

PROPERTIES ACROSS OCEAN AVENUE

Linwood Farnworth Mildred Farnworth 903 Ocean Avenue Portland, ME 04103	418A-A-1,11
Vincent G. Devito Ethel H. Devito 474 Presumpscot Street Portland, ME 04103	418A-A-2
Dragon Products Company (applicant) 38 Preble Street, P. O. Box 1521 Portland, ME 04104	418A-A-5, 12

(1958)



LEGEND

- R1 - Residential 1
- R2 - " 2
- R3 - " 3
- R4 - " 4
- R5 - " 5
- R6 - " 6
- 01 - Business 1
- 02 - " 2

"Redlined" changes from 1-28-99 draft by City

AGREEMENT BETWEEN

CITY OF PORTLAND

AND

DRAGON PRODUCTS, INC.

AGREEMENT made this \_\_\_\_ day of \_\_\_\_\_, ~~1999~~2000 by and between the CITY OF PORTLAND, a body corporate and politic, located in Cumberland County and State of Maine (hereinafter the "CITY") and DRAGON PRODUCTS COMPANY, INC., a corporation with a business address of 38 Preble Street, P.O. Box 1521, Portland, Maine 04104 (hereinafter "DRAGON").

WITNESSETH:

WHEREAS, DRAGON did request a rezoning of property located at Ocean Avenue, in Portland, in order to permit the expansion of its existing legally nonconforming mining operation and on the site of its legally nonconforming ~~cement~~~~concrete~~concrete plant; and

WHEREAS, the Planning Board of the City of Portland, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberation thereon, recommended the rezoning of the property as aforesaid, subject, however, to certain conditions; and

WHEREAS, the CITY by and through its City Council has determined that said rezoning would be pursuant to and consistent with the CITY'S comprehensive land use plan and consistent with the existing and permitted uses within the original zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose by agreement the following conditions or

restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the CITY authorized the execution of this Agreement on \_\_\_\_\_,  
~~1999~~2000;

NOW, THEREFORE, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The CITY shall amend the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49 of the Portland City Code, by adopting the map change amendment shown on Attachment 1. (Is this a plan the City will produce?)
2. The property ~~shall~~may be developed substantially in accordance with the site plans and elevations shown on Attachment 2; including relocating the concrete plant, storage silos, and rock crusher, provided, however, that such plan and elevationsdevelopment shall be subject to full site plan review and approval by the Planning Board; ~~if required by City ordinances.~~
3. DRAGON shall be authorized to establish and maintain only those uses or any combination of the uses listed below:
  - a. Mining and crushing of stone for use in manufacture of concrete on the site, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth herein and established by State and Federal law.
  - b. Concrete manufacture and processing.
  - c. S~~O~~utdoor storage of materials utilized in the concrete manufacturing ~~allowed on the site~~, material manufactured on the site (including concrete blocks produced as an incidental part of its operations) and related machinery and equipment, provided that such storage is limited to the areas shown on Attachment 2. Rock storage shall be relocated from its current site to the areas shown on Attachment 2.
  - ~~d. The buffer strip shown on Attachment 2 shall remain in its existing natural condition.~~
4. Prior to the commencement of any mining, Dragon shall obtain from the City a Certificate of Occupancy, verifying that the site alterations of the project as

approved by the Planning Board, including the relocation of the concrete plant and the removal from the site of old, unused equipment and buildings, etc. have been completed to the satisfaction of the City in accordance with this Agreement.

5. If the Certificate of occupancy is not issued within five (5) years of the date of final site plan approval by the Planning Board, this rezoning agreement shall automatically terminate and the land shall automatically revert to the R-3 or any successor zone classification.
6. DRAGON shall construct ~~the~~ a densely vegetated berm and fencing along that portion of the property abutting Ocean Avenue, as indicated on Attachment 2.
7. The natural vegetation existing in the Permanent Buffer Zone along the perimeter of the property proposed quarry expansion shall remain in its natural state, as indicated on Attachment 2. This area, or any portion of it, may not be separately conveyed apart from the property as a whole.
- ~~8. DRAGON shall address to the satisfaction of the Planning Department and Public Works, the existing substandard stormwater condition on Ocean Avenue adjacent to its parcel, including building an adequate drainage ditch along Ocean Avenue, and shall thereafter confine surface water runoff within its site. Pavement and stormwater infrastructure along Ocean Avenue and adjacent to this site parcel shall be repaired and maintained by DRAGON as required by Public Works.~~
- ~~9. DRAGON shall relocate the rock crusher from its current location to the rear of the site, as indicated on Attachment 2.~~
- ~~10. DRAGON shall relocate the entrance/ingress/egress driveway to the premises, and shall create a slip lane for slow moving traffic along ocean Avenue as indicated on Attachment 2.~~
- ~~11. DRAGON shall relocate the concrete batch plant and the conveyor belt to the concrete batch plant to the rear of the site, as indicated on Attachment 2, within five years of the date of this Agreement.~~
- ~~12. DRAGON shall relocate the silos to the rear of the site, as indicated on Attachment 2.~~
- ~~13. DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. In no event shall more than ~~three~~ four (34) individual blasts per month be permitted. All blasting on the site shall occur on Monday through Saturday between the hours of 7:00 a.m. and 4:00 p.m. and between the months of March and November.~~
- ~~14. All mining operations on-site shall be conducted within the building envelope indicated on Attachment 2.~~

150. DRAGON shall hose down its trucks ~~on the at the rear of~~ before exiting the site to reduce the amount of debris and residue tracked on the street.
161. DRAGON agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including but not limited to blasting and reclamation, as set forth in 38 M.R.S.A. §§490-W to 490EE, attached hereto and incorporated herein, except, where municipal standards adopted by the CITY are more restrictive, the CITY standards shall apply.
172. Reclamation shall be completed substantially in accordance with the reclamation plan as indicated on, Attachment 3; provided, however, that such plan shall be subject to full review and approval by the Planning Board, if required by City ordinances.
183. DRAGON shall meet all standards contained in sections 14-265, 14-266, and 14-267 of the Portland City Code, except as follows:
- a. No new fence shall be required pursuant to 14-266(6) except as shown on Attachment 2 as may be required by the Planning Board during final site plan review.
  - b. Outside storage of stone shall not be required to meet the standards of §14-266(10).
  - c. Vibration standards in 14-267(3) shall not apply to blasting.
  - d. Noise standards in §14-267(2) shall not apply to blasting.
  - e. The existing concrete plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is relocated, but shall be limited to 65 decibels of noise as measured at property lines in accordance with the procedures set forth in §14-267(2).
194. Until it has relocated the concrete plant, DRAGON shall maintain ownership of all property currently owned by it at this site and also the parcels owned by Dragon and located across Ocean Avenue from this site, more particularly described as Tax Map 418, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.
- ~~20. This contract shall automatically terminate upon the conveyance of this property by DRAGON to another owner or entity and the area shall automatically revert to R-3 or any successor zone classification.~~



The above stated restrictions, provisions and conditions are an essential part of the rezoning, shall run with and bind the subject premises, shall bind DRAGON, its successors and assigns, as permitted by this Agreement, owner of said property or any part thereof or interest therein, and any party in possession or occupancy of said property or any part thereof, and shall inure to the benefit of and be enforceable by the CITY, by and through its duly authorized representatives.

If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

Except as expressly modified herein, the use and occupancy of the subject premises shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

In the event that the CITY claims that DRAGON or any successor fails to continue has failed to utilize the property in accordance with this Agreement, or in the event of a otherwise breach of ed any conditions set forth in this Agreement, the Planning Board shall have the authority, after hearing, to resolve the issue resulting in the breach or the failure to operate. The resolution may include giving DRAGON a hearing and opportunity to be heard, to determine whether any breach has occurred. Appeals of the Planning Board decision shall be resolved by binding arbitration. If DRAGON does not correct any breach of this Agreement within 30 days of the arbitration decision, then the Planning Board may make a recommendation to the City Council that the site be rezoned to R-3 or any successor zone and that this Agreement be terminated, requiring a cessation of the blasting use permitted under this terms of this

Agreement. However, the termination of the contract will not require cessation of the concrete and cement processing and manufacturing and processing uses located on the site prior to the date of execution of this contract, or as relocated pursuant to this Agreement.

WITNESS:

CITY OF PORTLAND

\_\_\_\_\_

By: \_\_\_\_\_

Robert B. Ganley  
Its City Manager

STATE OF MAINE  
CUMBERLAND, ss.

Date: \_\_\_\_\_, 19992000

Personally appeared the above-named Robert B. Ganley, in his capacity as City Manager, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the City of Portland.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

WITNESS:

DRAGON PRODUCTS COMPANY, INC.

\_\_\_\_\_

By: \_\_\_\_\_

Its \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss.

Date: \_\_\_\_\_, 19992000

Personally appeared the above-named \_\_\_\_\_, in his/her said capacity and acknowledged the foregoing instrument to be his/her free act and deed and the free act and deed of Dragon Products, Inc.

Before me,

---

Notary Public/Attorney at Law

Draft: March 30, 2000  
F:\CS\ND\DRAGON\Portland.aqr-red.wpd

## HISTORY OF DRAGON PRODUCTS COMPANY'S ZONING PROPOSAL

April, 1996: ICPAC zoning process provides notice to Dragon that adjacent land is being rezoned as part of overall review of Industrial Zoning in Portland. Dragon's Ocean Avenue site with quarry and concrete manufacturing operations is not included, despite the fact that it is located in an R-3 residential zone.

May, 1996: Dragon approaches Planning Board to have its site included in industrial rezoning and attends two workshops.

June 11, 1996: At public hearing before Planning Board, Summer Place residents raise objections to rezoning of site, and Dragon's request is dropped from the ICPAC process.

January, 1997: New industrial zoning is passed by City without changing zoning of Dragon site.

June, 1997: Dragon does noise study to provide information on current operations to City and to neighborhood.

October, 1997: Dragon filed an application for contract zoning to allow mining on its site with the Planning Board.

November, 1997: Dragon hosts meeting of interested neighbors and provides site walk for neighbors and concerned citizens.

February 10, 1998: Planning Board holds first workshop to consider request and asks for: (a) text of the proposed contract zone; (b) a better site plan; (c) a history of parcel.

April 28, 1998: Planning Board holds second workshop to review requested information and to discuss MeDEP mining standards, including vibration and blasting standards.

May 26, 1998: Dragon hosts site walk for Planning Board and Planning staff.

December 8, 1998: Planning Board holds third workshop and reviews plans showing proposed relocation of concrete manufacturing operations to rear of site, and redesign of Ocean Avenue portion of lot. Planning Board requests further details on Ocean Avenue redevelopment and reclamation plans for site after mining is completed.

April 28, 2000: Planning Board holds fourth workshop to review requested information.

# Memorandum

To: Portland Planning Board

From: Christopher S. Neagle, Esquire  
Attorney for Dragon Products Company, Inc.

CON

Date: March 27, 1998

Re: History of Ocean Avenue Site

---

Based on our research in the Cumberland County Registry of Deeds, I offer the following history of the Dragon Products' site:

1. In 1932, Joseph Cook acquired 12.5 acres of land on Ocean Avenue in the same general area of the existing concrete manufacturing facility and conveyed it to Cook & Company, Inc. by the deed recorded in Book 1409, Page 483.
2. In 1937, Cook & Company, Inc. acquired a 150 foot by 100 foot parcel in the same general area of the existing manufacturing plant by the deed recorded in Book 1516, Page 475.
3. In 1962, Cook & Company, Inc. acquired an additional 4 acres on Ocean Avenue between its 1932 site and the road to the City dump and also an additional 6 acres lot next to its concrete plant, by the deed recorded in Book 2717, Page 446.
4. In 1968, Cook & Company, Inc. conveyed all of its property to The Cook Concrete Company, by the deed recorded in Book 3064, Page 756.
5. In 1985, Farland Realty, Inc. (a corporation related to the Cook Concrete Company) acquired 16 acres on Ocean Avenue adjacent to the existing mining operation by the deed recorded in Book 6995, Page 254. The parcel was transferred to The Cook Concrete Company in 1991 by the deed recorded in Book 9472, Page 330.
6. In 1991 the Cook Concrete Company conveyed its entire 38.4 acre site to Dragon Products Company, Inc. by the deed recorded in Book 9472, Page 348. Also in 1991, Farland Realty conveyed the residence and lot across the street by the deed recorded in Book 9473, Page 1.

Most of the proposed stone mining activity is located on the parcels acquired in 1962 and in 1985. A plan showing these parcels is attached.

PROPOSED DRAGON INDUSTRIAL ZONE

THREE FOOT BUFFER STRIP BEYOND THE ZON

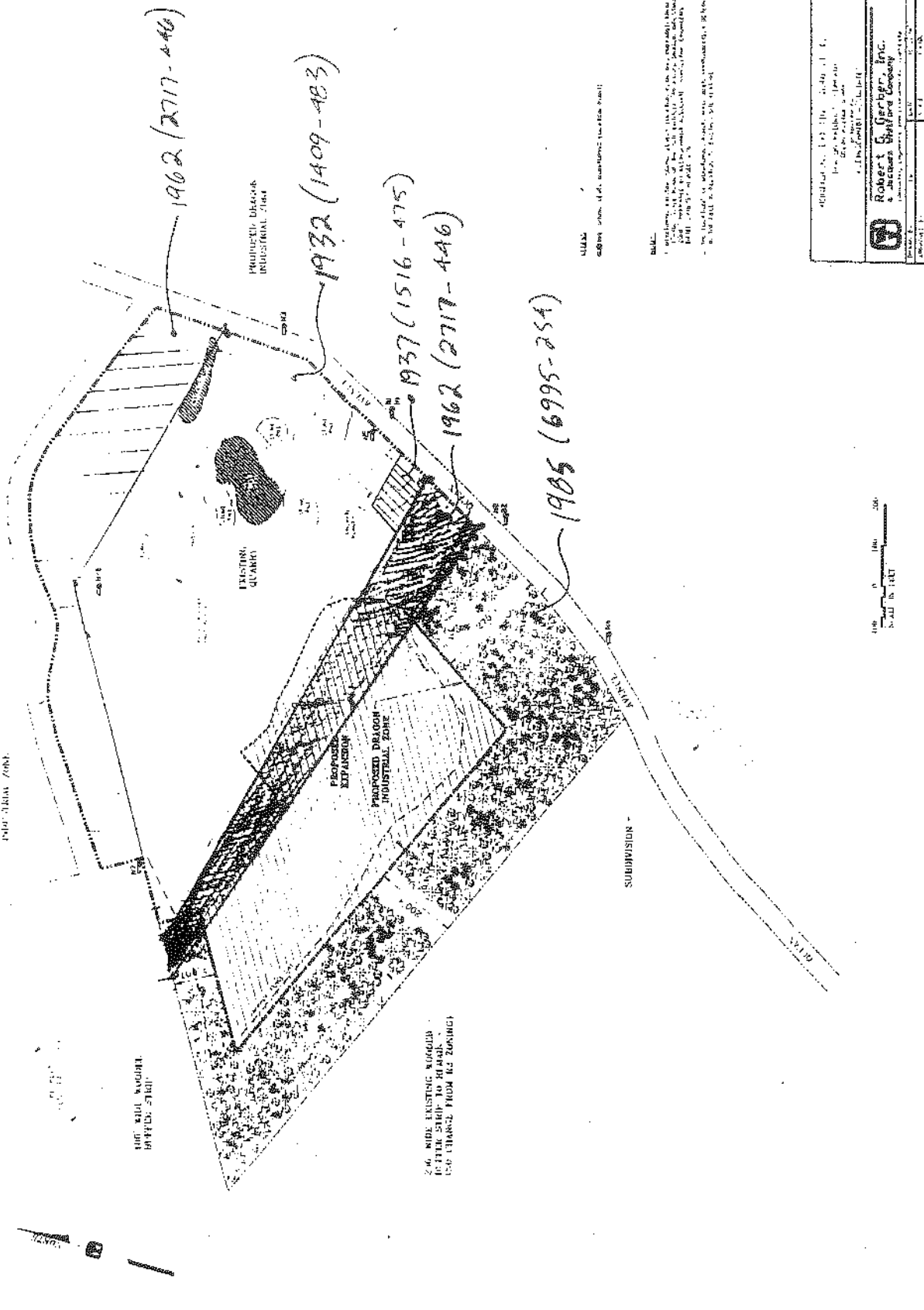
EXISTING QUARRY

PROPOSED EXPANSION

PROPOSED DRAGON INDUSTRIAL ZONE

SUBDIVISION

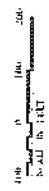
200' WIDE EXISTING BUFFER STRIP TO BE MAINTAINED FROM THE ZONING



SCALE: 1" = 100'

NOTES: 1. THIS PLAN IS THE PROPERTY OF THE CITY OF... 2. THE CITY ENGINEER HAS REVIEWED THIS PLAN AND HAS FOUND IT TO BE IN ACCORDANCE WITH THE CITY ZONING ORDINANCES...

Robert S. Gerber, Inc.  
 1000 ...  
 1000 ...  
 1000 ...



Haley & Aldrich, Inc.  
465 Medford Street  
Suite 2200  
Boston, MA 02129-1400  
Tel: 617.886.7400  
Fax: 617.886.7600  
Email: BOS@HaleyAldrich.com



MEMORANDUM

7 July 1999  
File No. 19441-000

TO: Kleinschmidt Associates  
Leslie Corrow

C: H&A  
Jim Weaver

FROM: Haley & Aldrich, Inc.  
Andrew F. McKown, P.E. *AM*

SUBJECT: Blast Vibration Standards  
Proposed New Quarry  
Portland, ME

Attached are two figures which summarize the vibration limits for (a) the Portland Zoning Ordinance, and (b) the Maine DEP Performance Standards for Quarries. You asked that we summarize and present the limits in an understandable format and compare the limits to something a layman could relate to.

Figure 1 presents the Portland Zoning Ordinance limits as well as the two options provided for in the Maine DEP standards. Figure two presents the same limits and also compares the limits to some everyday household vibrations people may feel, as well as to the perceptibility limits for humans. Some comments on the U.S. Bureau of Mines safe limits and what they mean follow, along with some other pertinent findings from U.S. Bureau of Mines research.

Between about 1960 and 1997, the U.S. Bureau of Mines conducted extensive research into the effects of blasting on residential structures, and concluded several things: (1) The best vibration criterion for predicting whether blasting vibrations might damage homes is peak particle velocity of ground motion. Peak particle velocity is the speed at which the ground moves up and down (or back and forth) when elastic vibration waves travel by. (2) Safe levels of ground vibration from blasting range between 0.5 and 2.0 inches per second (ips) peak particle velocity for residential-type structures, depending on the type of construction and frequency of blast vibrations (see Figure 1). The frequency of ground vibration is the number of elastic vibration waves which pass by in a given unit of time, measured in cycles

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Kleinschmidt Associates

6 July 1999

Page 2

per second, or Hertz (Hz). The lowest limits (0.5 ips for plaster walls and 0.75 ips for drywall construction) are for low frequency vibrations (less than 10 to 15 Hz), where the ground vibrations are near the resonant frequencies of residential type structures and can result in amplification of the vibrations on the upper floors of the structures. (3) The safe limits are to protect against cosmetic damage to residential structures, such as hairline cracking in plaster walls or gypsum drywall. (4) The safe limits are based on a less than 5% probability of cosmetic damage. Therefore if the limits are slightly exceeded, it does not mean damage has occurred, only that the probability of damage is greater than about 5%. (5) People can feel vibrations at levels which are well below (10 to 100 times less than) levels which might cause cosmetic damage (see Figure 2). (6) Normal everyday events in homes (such as door slamming, jumping, and changes in humidity and temperature) can cause stresses and strains in the structures equivalent to the strains produced by ground vibrations of 0.3 to 3.0 ips.

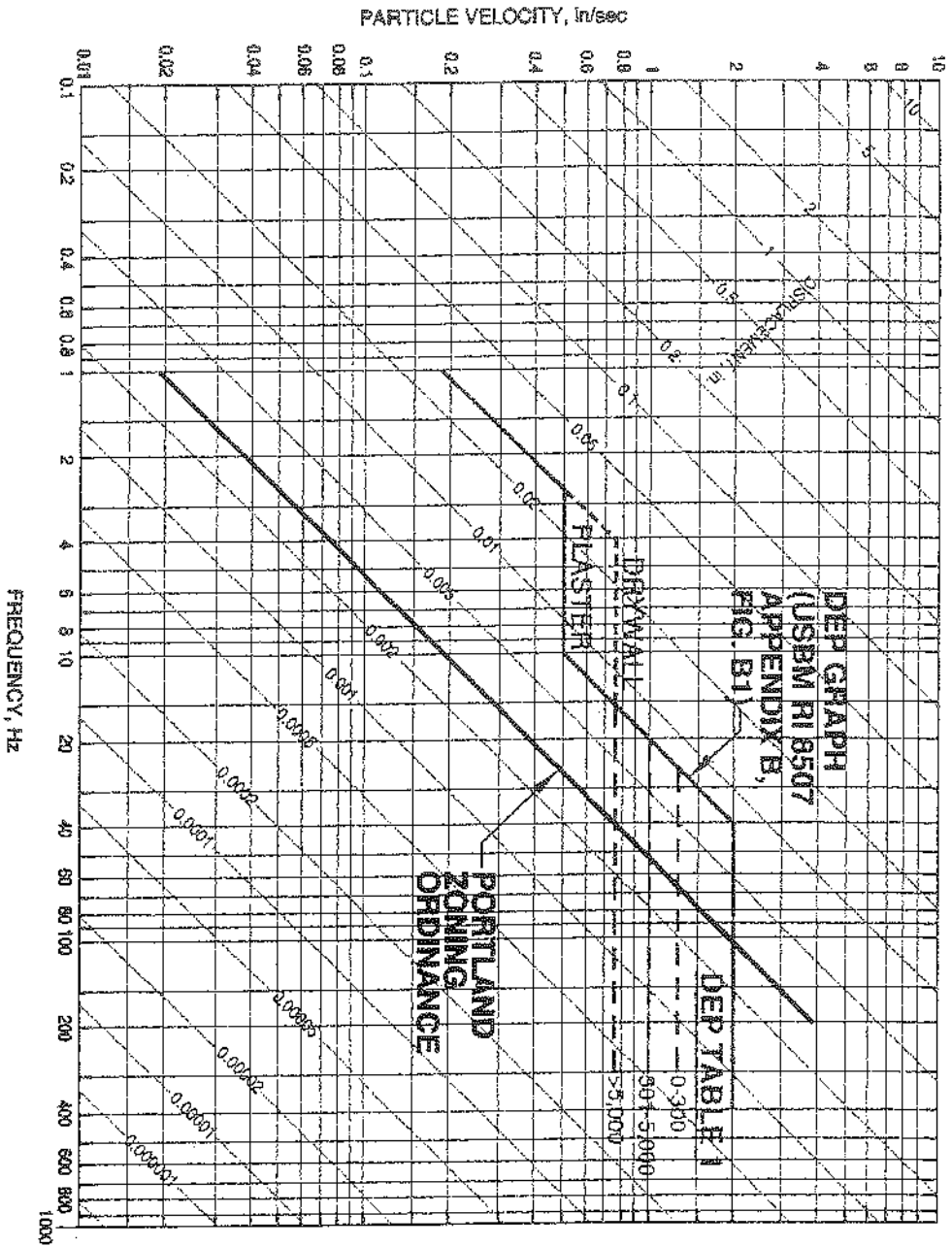
We hope these figures and comments assist you in your work. Please call if you have any questions or require more information.

Attachments

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TERRY &  
ALDRICH  
ENGINEERING &  
ENVIRONMENTAL  
SOLUTIONS

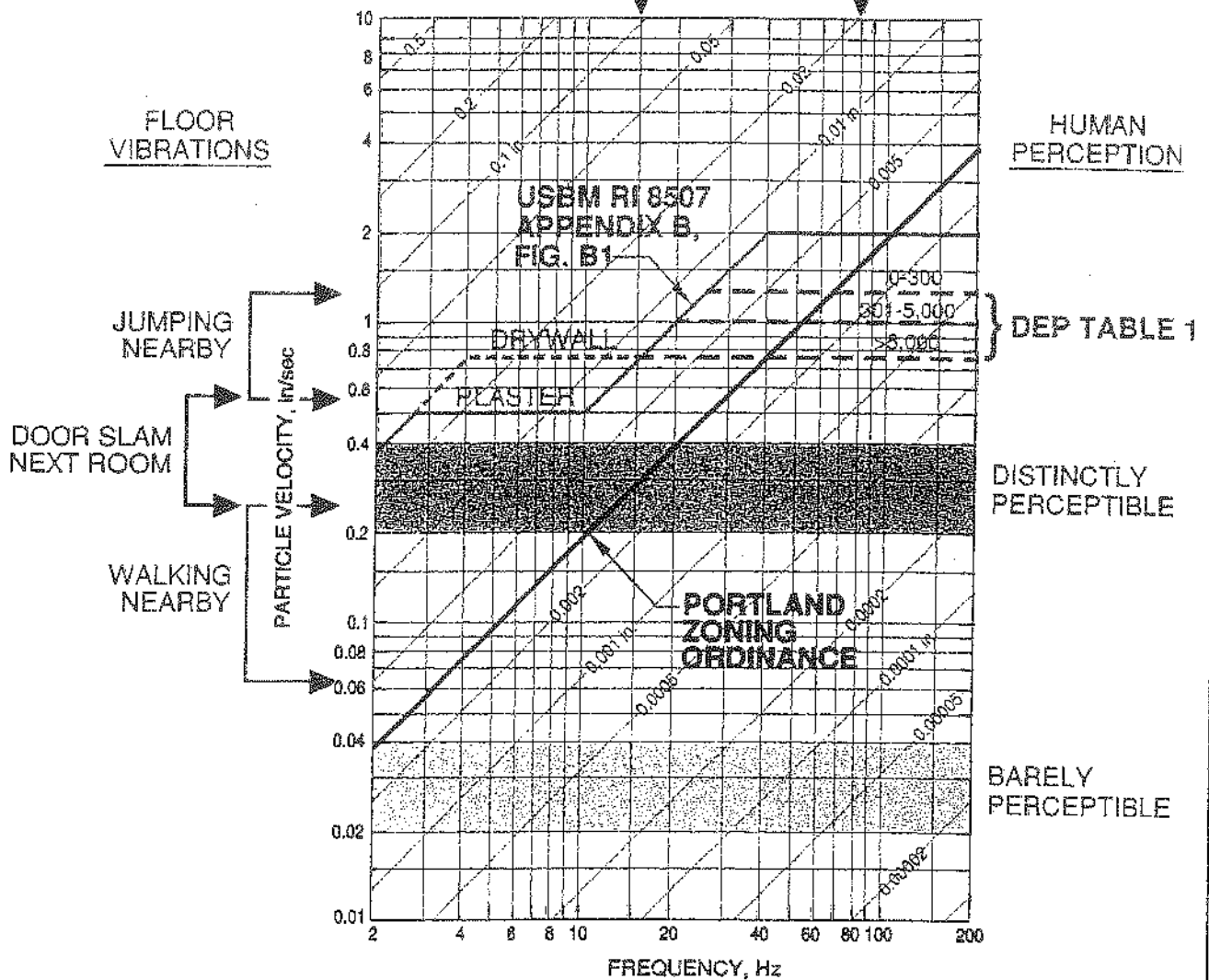
PREPARED FOR KLEINSCHMIDT ASSOCIATES

COMPARISON OF VIBRATION LIMITS  
MAINE DEP QUARRY REGULATIONS  
VS. PORTLAND ZONING ORDINANCE

SCALE: AS SHOWN

JULY 1989

TYPICAL RANGE OF  
BLAST VIBRATIONS FREQUENCIES  
IN NEW ENGLAND QUARRIES



19441-000 A02


 <p>UNDERGROUND ENGINEERING &amp; ENVIRONMENTAL SOLUTIONS</p>	<p>PREPARED FOR KLEINSCHMIDT ASSOCIATES</p> <p><b>COMPARISON OF VIBRATIONS MAINE DEP QUARRY REGULATIONS AND PORTLAND ZONING ORDINANCE VS. TYPICAL FLOOR VIBRATIONS AND HUMAN PERCEPTION LIMITS</b></p> <p>SCALE: AS SHOWN</p> <p>JULY 1999</p>
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FIGURE 2



Attachment 7

CHRISTOPHER S. NEAGLE  
PARTNER  
e-mail: csn@verdan.com

ONE PORTLAND SQUARE  
PORTLAND, MAINE 04112-0586  
207-774-4000 • FAX 207-774-7499

**Hand Delivered**

April 26, 2000

Sarah Hopkins  
Planning Department  
Basement  
Portland City Hall  
389 Congress Street  
Portland, ME 04101

Re: Dragon Products Company, Ocean Avenue  
Contract Zoning Proposal

Dear Sarah:

To supplement the material that I delivered last month, I enclose a copy of an engineer's explanation of the difference between the City and MeDEP vibration standards. As it has been explained to me by the engineer, the simple model to illustrate the difference is the ripples caused by a stone being thrown into a pond.

If you imagine a cork bobbing on the water in the ripples, the displacement (City standard) is the distance that the cork moves up and down, and the peak particle velocity (MeDEP) standard) is the speed by which it moves up and down.

By staying within the MeDEP vibration standards for blasting, the neighbors can be assured that there will be no damage to their homes. Please call me if you have any questions.

Sincerely,

  
Christopher S. Neagle

CSN/csn

Enclosures

cc: David S. Grinnell, Dragon Products Company

P:\CSN\DRAGON\HOPKINS.LTR

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MEMORANDUM

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**TO:** DAVID GRINNELL  
**FROM:** ANN W. THAYER, C.G., ENVIRONMENTAL MANAGER  
**SUBJECT:** RECLAMATION STANDARDS FOR PORTLAND QUARRY  
**DATE:** 1/26/00

---

I understand that the Portland Planning Board has requested additional information on the reclamation of Dragon's Ocean Ave. quarry. The attached is a summary of reclamation requirements that are consistent with 38 MRSA 490-Z Performance Standards for Quarries. Reclamation, as defined under Article 8-A, means "the rehabilitation of the area of land affected by mining, including, but not limited to, stabilization of slopes and creation of safety benches, the planting of forests, the seeding of grasses..." The objective of the reclamation standard is to minimize the impact posed by an affected area.

Dragon will be required to restore the affected lands associated with the Ocean Ave operation to a condition that minimizes the safety risks posed by the site, is protective of future impacts to the environment (from fugitive dusts, soil and sediment run-off, etc) and is consistent with the intended future use of the site (residential, open-space, commercial or industrial use). In general, Dragon has an obligation to stabilize rock slopes to prevent rockfalls and to stabilize overburden in accordance with the best management practices for erosion and sedimentation control. In meeting the performance standard for quarry reclamation, Dragon will be required to address the following:

- A. Highwalls, or quarry faces, are to be treated in such a manner as to leave them in a condition that minimizes the possibility of rock falls, slope failures and collapse. A highwall that is loose may be controlled by the use of blasting or scaling, the use of safety benches, the use of flatter slopes or reduced face heights, or the use of benching near the top of the face or rounding the edge of the face.
- B. Exposed overburden or soil is to be stabilized to minimize erosion and promote sedimentation control. Slopes are to be graded to minimize run-off and exposed soil may be mulched or otherwise covered until a vegetative cover is established.
- C. A vegetative cover is to be established by seeding affected land except for quarry walls and flooded areas. Vegetative cover used in reclamation may consist of grasses, legumes, herbaceous or woody plants, shrubs, trees or a mixture of these.
- D. Unusable structures are to be removed and unusable access roads, haul roads and other support roads are to be reclaimed.
- E. Affected lands are to be reclaimed within 2 years after final operational grading has been reached.

## **Ann W. Thayer, C.G.**

*Environmental Manager*

### **Education**

Colby College

*B.A., Geology and Geology/Environmental Studies, 1986* Dean's list 1984-1986, Distinction in the major of Geology.

### **Continued Education**

- Caribbean Solid Waste - Independent Sabbatical
- JW Future Leader & Managers Training
- Visual MODFLOW
- Applied Geochemistry
- Harvard Negotiation Training
- ASFE Contracts and Loss Prevention
- Dense Non-Aqueous Phase Liquids in Fractured and Porous Media
- Hazardous Waste Site Supervisory Course
- 40 Hour Waste Site Health & Safety Course

### **Professional Background**

- Environmental Manager, Dragon Products Company, Thomaston, Maine, 1998
- Senior Project Manager, JacquesWhitford Company, Inc., Freeport, Maine, 1992 to 1997.
- Senior Geologist/Technical Manager, Weston Geophysical Corporation, Hallowell, Maine, 1989 to 1992.
- Geologist, Weston Geophysical Corporation, Westboro, Massachusetts, 1987 to 1989.
- Geophysical Field Technician, Maine Geological Survey, Augusta, Maine, 1986.
- Contractor, Department of Environmental Protection, Augusta, Maine, 1986.

### **Registration**

- Certified Geologist, #346, Maine

### **Professional Activities**

- Geological Society of Maine
- Environmental & Engineering Geophysical Society
- National Ground Water Association

### **Civic Activities**

- Registered Maine Guide
- Master Composter

### **Key Project Experience - Geologic and Geophysical Investigations**

Project Manager for investigation associated with Pike Industries' gravel mining and rock quarrying operation in Poland, Maine.

Project Geologist for geologic and geophysical mapping of subsurface conditions along supply pipeline route for a proposed power generating plant in northern Rhode Island.

Project Geologist for geologic and geophysical mapping of subsurface conditions along a proposed water distribution pipeline in northern Rhode Island.

Field Geologist for bedrock and soil slope stabilization project in Western Massachusetts. Unstable material and excavated slopes caused several rock falls and soil slumps along an access road and transformer yard excavation for the Bear Swamp Pump Storage facility in Rowe, Massachusetts.

Project Geologist for major development project in New Ipswich, New Hampshire. Responsibilities included geologic mapping, coordination of seismic refraction program, and analytical evaluation of bedrock content and condition from low to high elevations throughout the property.

*Maine Department of Environmental Protection*

Project Manager for RI/FS in Plymouth, Maine where operations at a former waste oil storage and transfer facility resulted in contamination of the underlying bedrock aquifer with PCB's solvents and semi volatile organics. Investigations involved detailed assessment of the source area, affected residential wells and the fractured bedrock aquifer.

*Maine Department of Environmental Protection*

Project Manager for RI/FS in South Berwick, Maine. Led evaluation of multiple potential source areas, migration pathways in the bedrock and surficial aquifer, and potential receptors of the groundwater contamination.

*Maine Department of Environmental Protection*

Program Manager for multi-method geophysical investigation and test pit program in search of buried drums and industrial waste at an unregulated landfill site in North Berwick, Maine.

*Phillips & Gordon*

Geologist for evaluation of bedrock and overburden groundwater contamination assessment in a Massachusetts community. A number of private residential water supply wells were found to be contaminated with chlorinated solvents and cyanide compounds. The contamination was attributed to historical disposal practices at a nearby plating facility.

*Baker Engineers*

Project Geologist - compiled Geologic information in support of Mississippi's bid to attract the federally funded super conducting, super collider. Responsibilities included compilation of published geologic data.

**Property Transfer Site Assessments**

*Central Maine Recycling*

Project Manager for the assessment of former poultry feed processing facility in Augusta, Maine. Investigated potential soil and groundwater contamination due to historic operations.

*Flakt Products*

Project Manager for the assessment and remediation of soil contamination due to operations at a metal fabrication facility in Fitchburg, Massachusetts. Acted as liaison between the client and the Massachusetts Department of Environmental Protection.

*Attorney*

Project Manager for environmental site assessment for property transfer in Westminster, Massachusetts. Performed hydrogeologic assessment of the property and used geophysical techniques to evaluate the migration of a leachate plume onto the property from an adjacent unlined landfill.

*Toll Brothers*

Performed numerous site assessment studies in Massachusetts, New Jersey, and Pennsylvania. Investigations have included geologic and hydrogeologic characterization of diverse geologic settings, geophysical surveys, radiation surveys, groundwater sampling and permeability testing.

**MONITORING EXISTING SOUND LEVELS  
DRAGON PRODUCTS COMPANY  
OCEAN AVENUE QUARRY  
PORTLAND, MAINE**

Prepared for: Kleinschmidt Associates  
Prepared by: Jacques Whitford  
July 23, 1997



**Gerber - Jacques Whitford**

Robert G. Gerber, Inc. - Jacques Whitford, Inc.  
*Consulting Engineers, Geologists and Environmental Scientists*

174 South Freeport Road  
Freeport, ME U.S.A. 04032

Tel: 207-865-6136  
Fax: 207-865-1071

July 23, 1997  
File 971016

Mr. Jon Christensen  
Kleinschmidt Associates  
75 Main Street, P.O. Box 576  
Pittsfield, Maine 04967

**Subject:      Monitoring Existing Sound Levels  
                 Dragon Products Company, Ocean Avenue Quarry  
                 Portland, Maine**

Dear Mr. Christensen:

Jacques Whitford is pleased to present this report on the monitoring of existing sound levels at the Dragon Products Company (Dragon) Ocean Avenue Quarry and Cement Plant in Portland, Maine. Monitoring at the quarry was conducted to assess current sound levels at the site for comparison with applicable noise regulations.

### **Project Background**

Dragon Products is considering an expansion of their quarrying operations located on Ocean Avenue in Portland, Maine (Figure 1, Site Locus). As part of the expansion, the zoning of Dragon's property may change.

Dragon Products has been operating on Ocean Avenue in a residentially-zoned area. The property's zoning may change to industrial, or possibly a unique zone of its own, as the City reassesses its zoning ordinances. City of Portland noise regulations vary from zone to zone. The City allows a maximum average sound level of 75 dBA at the property lines in industrially-zoned areas. City of Portland regulations appear to contain no noise regulations for residential zones.

A new residential development has recently been constructed in the vicinity of the Dragon quarry. Residents of the new subdivision are concerned about the noise levels that may be generated by any expansion of the quarry. Consequently, Dragon implemented a noise assessment to address the concerns of their neighbors and assess compliance of their existing operations with the City of Portland Regulations.





## Methodology

The noise assessment was conducted with two Metrosonics dB-308 Sound Analyzers. Measurements were recorded for  $L_{eq}$  (equivalent steady state sound level) at one minute intervals during the testing. Measurements were also obtained for  $L_{max}$  (maximum sound level), and  $L_{10}$  (sound level exceeded 10 percent of the time).

Baseline measurements were obtained on Saturday, June 14, 1997 when the Dragon facility was not in operation. These measurements were collected to assess other sources of noise in the vicinity of the site. These measurements were collected at locations B1 and B2 as shown on the attached site map (Figure 2).

Noise data was collected during plant operations on June 16 and 17, 1997. Measurements were taken over two hour time periods at each location. All of the noise data was collected during the morning hours of operation, which Dragon reported to be the busiest times at the facility.

Noise measurements were collected at four locations on Ocean Avenue: directly across from the entrance to the site (N1); at the property line of the nearest southern neighbor (N2); at the property line of the nearest northeastern neighbor (N3); and at the property line of Summer Place, a newly constructed subdivision south of the site (N4). Measurements were also obtained around the perimeter of the quarry site, including the entrance to the facility (N5, N6, N7, N8). Approximate locations of each monitoring station are included in Figure 2.

## Results

The results of the monitoring are presented in Table 1, attached. The table indicates the test location, date/time, and presents the first hour equivalent steady state sound level data, the second hour equivalent steady state sound level data, and the two hour equivalent steady state sound level data. Test locations B1 and B2 were baseline measurements and were collected over a four hour period.

Baseline measurements collected while the plant was not in operation ranged from 62.6 to 66.0 dB. The high reading was obtained from the baseline location (B1) directly across Ocean Avenue from the plant entrance.

Hourly noise measurements collected on June 16 and 17, 1997, ranged from 51.0 to 77.9 dB. The highest reading was collected at station N1, across Ocean Avenue from the facility entrance. Measurements collected around the perimeter of the quarry were all below 60 dB.



### Discussion

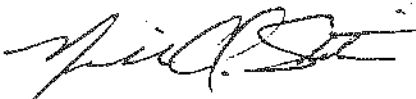
The measurements collected at the Dragon property lines and one location across Ocean Avenue indicate that the City of Portland industrial-zone standard of 75 dB was exceeded two times during the testing. The first hour of monitoring at location N5 at the Ocean Avenue property line resulted in a 76.1 dB equivalent steady state sound level. The first hour of monitoring at location N1 (across Ocean Avenue from the facility) was higher at 77.9 dB equivalent steady state sound level, indicating that traffic is a significant source of noise in the site vicinity.

The noise levels observed correspond to a period of relatively normal plant operation. However, our data must be qualified by the fact that changes in the operations at the plant (e.g., changes in truck traffic volume), or variation in ambient neighborhood noise, may result in noise levels that are different from those reported herein. Furthermore, sound levels may vary based on ambient climatology (e.g., temperature, humidity, wind).

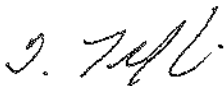
### Closure

If you have any questions or require any additional information regarding this project, please call. We have enjoyed working with Kleinschmidt Associates and Dragon Products.

Sincerely,  
JACQUES WHITFORD



Nicholas O. Sabatine  
Project Manager



D. Todd Coffin  
Environmental Scientist

### Attachments:

- Table 1 - Noise Monitoring Results
- Figure 1 - Site Locus
- Figure 2 - Site Plan
- Appendix A - Time Histograms



TABLE I  
 Noise Monitoring Results  
 Dragon Products Company  
 Ocean Ave., Portland, Maine

Permissible Noise Levels						
Regulation						
City of Portland (Residential Zoning)	No Noise Regulations					
City of Portland (Industrial Zoning)	75.0 dB (measured at the property line)					
Test Location	Date/Time	Hour 1 Sound Level (L <sub>eq</sub> )	Hour 2 Sound Level (L <sub>eq</sub> )	Two Hour Sound Level (L <sub>eq</sub> )		
B1 - Across from Plant Entrance	6/14/97 0830-1229	NA	NA	66.0 dB*		
B2 - Southern Neighbor Property Line	6/14/97 0830-1229	NA	NA	62.6 dB*		
N1 - Across from Plant Entrance	6/16/97 0650-0849	77.9 dB	74.0 dB	76.4 dB		
N2 - Southern Neighbor Property Line	6/16/97 0650-0849	65.2 dB	64.5 dB	65.0 dB		
N3 - Devito Property Line	6/16/97 0920-1119	65.6 dB	66.2 dB	65.9 dB		
N4 - Summer Place Property Line	6/16/97 0920-1119	63.4 dB	63.6 dB	63.6 dB		
N5 - Ocean Ave. Property Line	6/17/97 0700-0859	76.1 dB	71.9 dB	74.5 dB		
N6 - Quarry Southern Perimeter	6/17/97 0700-0859	53.3 dB	51.0 dB	52.3 dB		
N7 - Quarry Northern Perimeter	6/17/97 0940-1139	59.7 dB	59.7 dB	59.7 dB		
N8 - Quarry SW Perimeter	6/17/97 0940-1139	55.8 dB	54.8 dB	55.3 dB		

\* - Baseline measurements were collected over a four hour time period.

**CITY OF PORTLAND, MAINE  
MEMORANDUM**

**TO:** Chair Carroll and Members of the Portland Planning Board

**FROM:** Sarah Hopkins, Senior Planner

**DATE:** April 28, 1998

**RE:** Dragon Products Proposed Contract Zone

**Introduction**

Dragon Products has requested a second workshop with the Planning Board to discuss a potential contract zone to allow extraction and mining of stone at its plant on outer Ocean Avenue. The Dragon Products lot is 38.4 acres and is zoned R-3 Residential.

**Dragon's Participation in ICPAC**

The applicant participated in the Planning Board's review of the Industry and Commerce Plan Advisory Committee recommendations regarding the industrial zoning text and map changes and overall policy discussions. At that time, Dragon requested that the City rezone their parcel from the R-3 zone to the IH zone and allow mining and extraction within the IH zone. During the public hearings, a number of neighbors raised concerns regarding Dragon's request to be a permitted use at that site, and the impact of such a use.

Due to the number of issues raised and the policy considerations which must be discussed, the Planning Board decided to leave the site zoned R-3, and asked the applicant to return at a later date to resume the policy discussions. Leaving the site zoned R-3 allowed the plant to continue as a nonconforming use but restricts any expansion of the use.

**The Dragon Site and Operation**

The Dragon Products site consists of a stone quarry and concrete manufacturing plant. Although these uses have been located at this site since the 1930s, the site has been zoned R-3 Residential since the first zoning of Portland in 1958. Mining has occurred on and off at the site over the last fifty years.

The manufacture of concrete is a process in which stone, cement, and water are mixed. Currently, both mined stone and cement are brought to the plant by truck to be mixed with water. From there, the concrete is trucked to construction sites. According to the applicant's submission, an average of 13 to 26 trucks haul stone from April to November, creating 26 to 52 daily trips on Ocean Avenue (in/out).

The applicant has submitted a history of the land acquisition, uses, and ownership of the Ocean Avenue properties from 1932 to 1991. (See Attachment 4.) To summarize, the original 12.5 acre parcel was purchased in 1932. In 1937, 1962, and 1985, more property was purchased along Ocean Avenue, south of the original parcel.

From the aerial photograph, it appears that most of the property purchased in the 1930's and 1960's has been mined. The remainder of the parcel which has not been mined and is now proposed for mining was purchased in 1985.

### Contract Zone Proposal

Dragon Products has requested that the Board recommend a contract zone to the City Council which would allow the mining of stone from the quarry for use in the manufacture of concrete. The on-site mining would reduce the number of truck trips associated with bringing trucks filled with rock to the plant.

The applicant suggests the creation of a Dragon Industrial Zone for its property on Ocean Avenue. The new contract zone would allow the *mining of stone for use in the manufacture of concrete on the site* and would also incorporate all of the IH standards and DEP standards associated with mining.

The conditions contained in the contract relate to the site plan and placement of buildings and operations, the allowed use of mining, the storage of materials and machinery, the maintenance of a buffer strip, and the standards by which the performance of the plant can be measured. A list of the conditions follows. (The complete draft contract is included as Attachment 5.)

1. The CITY shall amend the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by 14-49 of the Portland City Code, by adopting the map change amendment shown on the proposed zoning map.
2. The property shall be developed substantially in accordance with the site plan and elevations shown on proposed site plan; provided, however, that such plan and elevations shall be subject to full site plan review by the Planning Board, if required by City ordinances.
3. DRAGON shall be authorized to establish and maintain only those uses or any combination of the uses listed below:
  - a. Mining of stone for use in manufacture of concrete on the site, provided that such operations are limited to the areas shown on the proposed site plan and further provided that such operations meet the standards set forth herein and established by State and Federal law.
  - b. Concrete manufacture and processing.
  - c. Storage of materials utilized in the manufacturing allowed on the site, material manufacture on the site and related machinery and equipment, provided that such storage is limited to the areas shown on the proposed site plan. Rock storage shall be relocated from its current site to the areas shown on the proposed site plan.
  - d. The buffer strip shown on the proposed site plan shall remain in its existing natural condition.

4. **DRAGON** shall relocate the rock crusher from its current location to the rear of the site, as indicated on the proposed site plan.
5. **DRAGON** shall relocate the conveyor belt to the concrete plant to the rear of the site, as indicated on the proposed site plan , within five years of the date of this Agreement.
6. **DRAGON** shall limit the total number of blasts on the site to a maximum of twenty (20) individuals blasts per year. All blasting on the site shall occur between the hours of 7:00 a.m. and 4:00 p.m. and between the months of March and November.
7. **DRAGON** shall hose down trucks on the site to reduce the amount of debris and residue tracked on the street.
8. **DRAGON** agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including but not limited to blasting, as set forth in 38 M.R.S.A. 490-W to 490EE.
9. **DRAGON** shall meet all standards contained in sections 14-265, 14-266, and 14-267, except as follows:
  - a. No new fence shall be required pursuant to 14-266(6).
  - b. Outside storage of stone shall not be required to meet the standards of 14-266(10).
  - c. Vibration standards in 14-267(3) shall not apply to blasting.
  - d. Noise standards in 14-267(2) shall not apply to blasting.
  - e. The concrete plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage, but shall be limited to 65 decibels of noise as measured at property lines in accordance with the procedures set forth in 14-267(2).
10. **DRAGON** shall maintain ownership of all property currently owned by it at this site and also the parcel owned by Dragon and located across Ocean Avenue from this site, more particularly described as Tax Map 418, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

### **Dragon Products Noise Study**

Dragon Products has commissioned a noise study of the plant and surrounding area. (See Attachment 8.) The study found that when the plant was not in operation, the noise level ranged from 62.6 to 66 dB. These readings were taken from a location directly across Ocean Avenue from the plant entrance. Hourly measurements ranged from 51.0 to 77.9 dB. Measurements collected around the perimeter of the quarry were all below 60 dB. A table of noise measurements are included with the report.

The study found that at times, the noise level across Ocean Avenue can be higher than levels within the quarry, given the amount of traffic along Ocean Avenue. The noise study did find that the noise standard was exceeded twice during the testing at the Ocean Avenue property line and across Ocean Avenue from the plant.

### **Performance Standards**

The applicant is currently working with City staff to evaluate and compare the IH and DEP standards for noise and vibration. We will have an analysis of that comparison for the Board at the next meeting.

### **Site Plan**

Included as Attachment 9 is a proposed site plan for the Dragon Plant. The site plan indicates the existing location of the concrete manufacturing plant, as well as the proposed relocation of the stone piles and conveyor belt. The plan also shows a new crusher located further back from Ocean Avenue.

According to the plan, the proposed contract zone will include the entire site, including the area shown as a permanent buffer zone. Including the buffer area in the contract zone was a suggestion of the Planning Board at the last workshop.

### **Vicinity Map**

Included as Attachment 2 is a zoning/vicinity map of the area. To the north of the site is the former City dump, now zoned Recreation and Open Space (ROS). (It is the City's expectation that one day this parcel will be redeveloped into a City park.) Further north, beyond the City Dump are single family homes. Across Ocean Avenue are a number of single family homes, including the Summer Place development. Dragon owns property directly across from the open portion of the plant. Further up Ocean Avenue/Presumpscot Street are a mixture of single family and industrial uses. To the south of the site is a large undeveloped parcel. Years ago this parcel was approved by the Planning Board as a multi-unit condominium project.

### **Policy Issues**

Below are a number of discussion points for the Planning Board to consider. As we learn more about the DEP Performance Standards related to quarry and mining operations, there will be more technical issues to discuss.

1. As indicated by the applicant's analysis of the history of the property, land was purchased by the Cooks (previous owner) for the mining of stone and manufacture of concrete after the property was zoned residential. In fact, the property now proposed for rezoning to mine was purchased speculatively in 1985.

The City of Portland has been consistent in its policy of keeping this parcel zoned residential. Regardless of this policy, the applicant and their predecessor has continued to annex additional property along Ocean Avenue.

2. Recently, the Summer Place parcel was rezoned from industrial to residential in response to the trend for more low intensive, residential uses along Ocean Avenue. A number of condominium projects were approved in the 1980s and 1990s consistent with that trend: Ocean Woods, Island View Condos, Briarwood and Pheasant Hill.
3. While it may not be a permitted use, the Dragon Plant and its uses have been a consistent presence along Ocean Avenue for the past 50 years. Dragon is a convenient resource for construction projects in Portland and throughout the region.
4. Once the area proposed for rezoning is mined, there will presumably be no more mining on the site. The applicant is clear that the manufacture of concrete will continue indefinitely at the site and that according to the DEP requirements there will be some reclamation of the site.
5. What are the reclamation plans for the site? The Board may wish to require a master plan for the quarry site as part of the contract for rezoning.

### Next Steps

Items left to be investigated by the Board:

1. Evaluation and analysis of noise study
2. Analysis and comparison of the IH and DEP noise and vibration standards
3. Site visit
4. Public hearing

### Attachments:

1. Aerial Photograph
2. Vicinity Map
3. Applicant's Proposal
4. History of Ocean Avenue Site with Map
5. Draft Contract
6. IH Zoning Text
7. DEP Performance Standards for Quarries
8. Noise Study with Map
9. Site Plan
10. Letters from Neighbors





PROPOSED QUARRY EXPANSION LIMIT

PROPOSED CONTRACT ZONE LIMIT

PERMANENT BUFFER ZONE

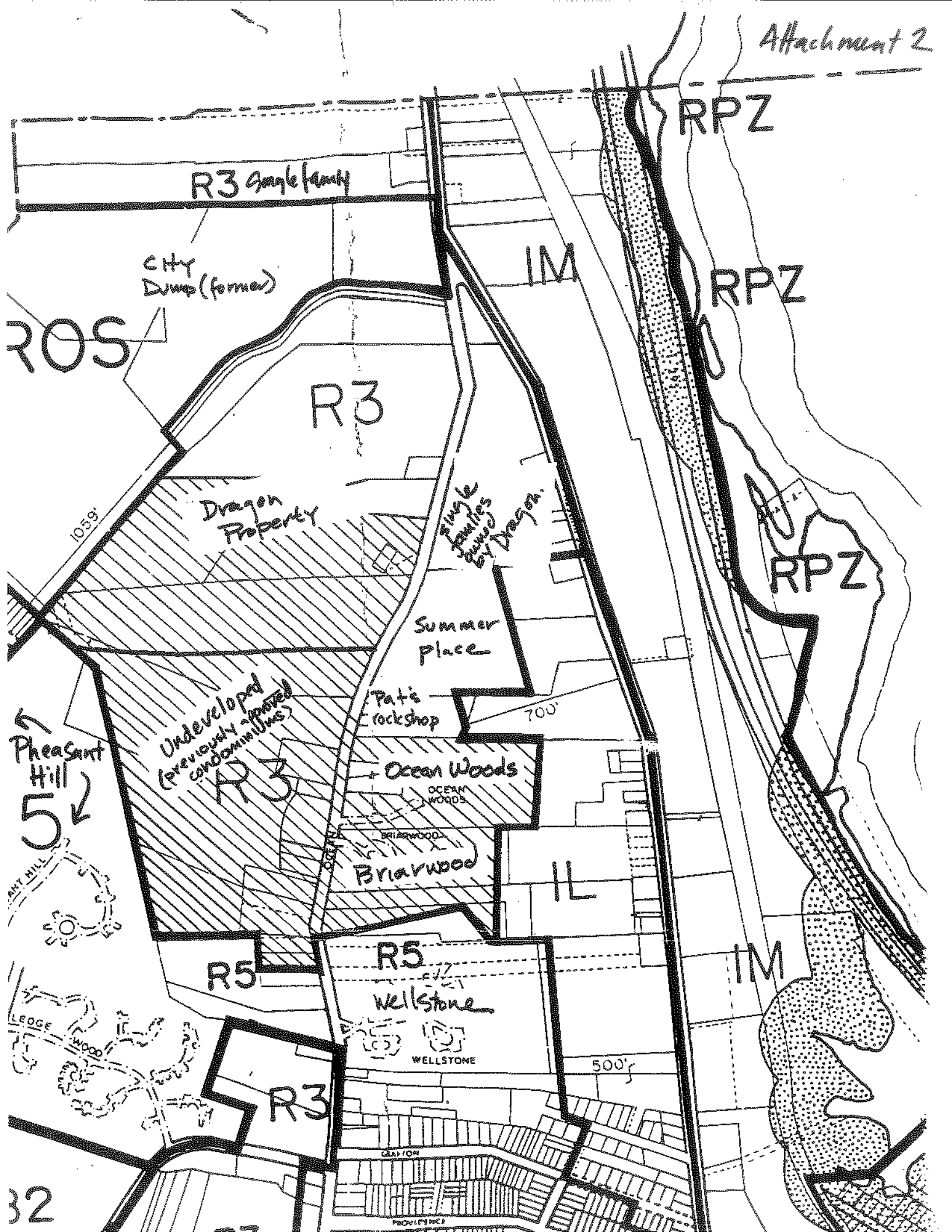
NEW ENCLOSED CRUSHER LOCATION

EXISTING CRUSHER SHALL BE REMOVED

RELOCATED TRUCK UNLOADING AREA

DRAGON PROPERTY

1000 FEET



## DRAGON INDUSTRIAL ZONE

1. **Site History:** Dragon Products Company owns approximately 38 acres west of Ocean Avenue adjacent to the old City dump. This property appears on sections of Tax Maps 415, 416A, 417 and 418.

The Dragon Products Company site consists of a stone quarry and a concrete manufacturing facility, which have been operated continuously on the Ocean Avenue site since at least 1934. The site has been known as the Cook's Concrete Plant, and was purchased by Dragon in 1991. The manufacture of concrete is a process of mixing stone, cement and water.

The facility is assessed by the City Assessor at more than \$1,300,000 and generates about \$33,500 in annual real estate tax revenues for the City.

2. **City Zoning:** The site has been zoned R-3 since the City first adopted zoning, as shown on the 1958 zoning map attached. The facility has operated continuously as a non-conforming use since that time.

The City of Portland Comprehensive Plan, originally written in 1974, states that "Cook's Quarry, an extractive use, is presently located in the R-3 Residential Zone adjacent to the dump, and should be included in the expanded Industrial Zone."

The 1993 City Industry and Commerce Plan Advisory Committee (ICPAC) recommended that the City provide a number of incentives "to promote growth of the industry and commerce sector in Portland". The City followed up on the ICPAC report with a review and revision of its industrial zoning. Dragon Products participated in that process and presented proposals for a rezoning of its property as part of the overall industrial rezoning. However, the Planning Board decided that the issues surrounding this site were too complex to be dealt with as part of the overall industrial rezoning, and encouraged Dragon to make a separate application. The only opposition that surfaced during that process was opposition from the Summer Place residents. The Summer Place site is diagonally across the street on Ocean Avenue, and was rezoned from industrial to residential in 1995. At the time, everyone was fully aware of the adjacent industrial use on the Dragon site.

3. **Proposed Contract Zone:** Dragon's only goal in this application is to clarify that it may mine stone from its site to use in its concrete manufacturing process. An argument exists that it may mine this stone as a continuation of the operation of its non-conforming use, but Dragon would prefer to be in a zone where it is a permitted use. No change in its concrete manufacturing operations is planned.

As shown on the attached site plan, Dragon Products proposes rezoning most of its site from R-3 to what is described as a "Dragon Industrial Zone". Dragon proposes to leave some of its site zoned R-3, establishing a 275 foot strip of land along Ocean Avenue, a 200 foot wide strip along its neighbor to the southwest and a 100 foot wide strip adjacent to the former City dump property. The proposed zone would incorporate all standards of the existing IH Industrial Zone with the following exceptions:

a. Use: The new permitted use would be for "concrete plants, including mining of stone for use of manufacture of concrete on the site".

b. Maine DEP Standards: All provisions of the attached 1996 Maine DEP Performance Standards for Quarries would be incorporated into the new zone, replacing particular sections of the City of Portland IH Zone, including:

(1) Vibration limits would be as set forth in the Maine DEP quarry standards.

(2) Noise limits for the concrete manufacturing plant would be 78 decibels along Ocean Avenue and 65 decibels at other property lines. Noise limits for blasting would be as set forth in Maine DEP quarry standards.

These standards provide many protections for the neighborhood, including groundwater protection, natural resources protection, reclamation standards, and detailed requirements for blasting, including pre-blast surveys of nearby buildings. Dragon intends to comply with these MeDEP standards in all respects.

4. Technical Information: Dragon has obtained the following technical information to assist in the process:

Noise Study. A noise study conducted during 1997 is attached to this application. It is important to note that when the first noise measurements were taken, at a time when the plant was shut down, there was 66 decibels of noise measured directly across the street from plant and 62 decibels of noise at the nearest neighbor. The noise was generated almost exclusively by the road traffic on Ocean Avenue, also known as Route 9, a busy street even on weekends.

When the concrete manufacturing plant was in full operation, measurements were generally 65 decibels or less at all property lines. The only exception was on Ocean Avenue near the plant, where the decibels measured up to 76 when the plant was in full operation. Note that even when the plant was in full operation, the highest noise level at the Summer Place property was 63 decibels, less than even the IL industrial standards adopted by the City.

Truck Traffic: The primary source of noise and vibrations for neighbors in this operation is probably the trucks which go to and from the facility along Ocean Avenue. Generally speaking, there are trucks that deliver cement, trucks that deliver stone, and trucks that take the manufactured concrete from the plant to various job sites.

Allowing Dragon to continue mining its stone will reduce the traffic by reducing the number of trucks that need to haul stone to the site. During a typical concrete production season from April through November, an average of 13 to 26 trucks haul stone on a daily basis. That means a total of 26 to 52 daily trips on Ocean Avenue since its truck needs to deliver the stone and then leave. Allowing Dragon to mine stone from its site will eliminate these truck trips from Ocean Avenue while the mining operations are in progress, reducing noise and vibrations in the neighborhood at large.

5. **Summary:** The portion of the facility that manufactures concrete has been a continuous operation since the 1930's and will continue operating indefinitely into the future. Whether Dragon mines more stone from its site or not, this manufacturing facility will continue operating as long as there is a demand for concrete in the Greater Portland area. The rezoning will allow the facility to continue operating as a permitted use (as opposed to a non-conforming use) and will also allow Dragon to mine stone from its site in accordance with Maine DEP guidelines.

P:\CSN\DRAGON\CONTRACT.ZNE

Attachment 4  
City of Portland  
Planning Board  
City

# Memorandum

To: Portland Planning Board

From: Christopher S. Neagle, Esquire  
Attorney for Dragon Products Company, Inc.

Date: March 27, 1998

Re: History of Ocean Avenue Site

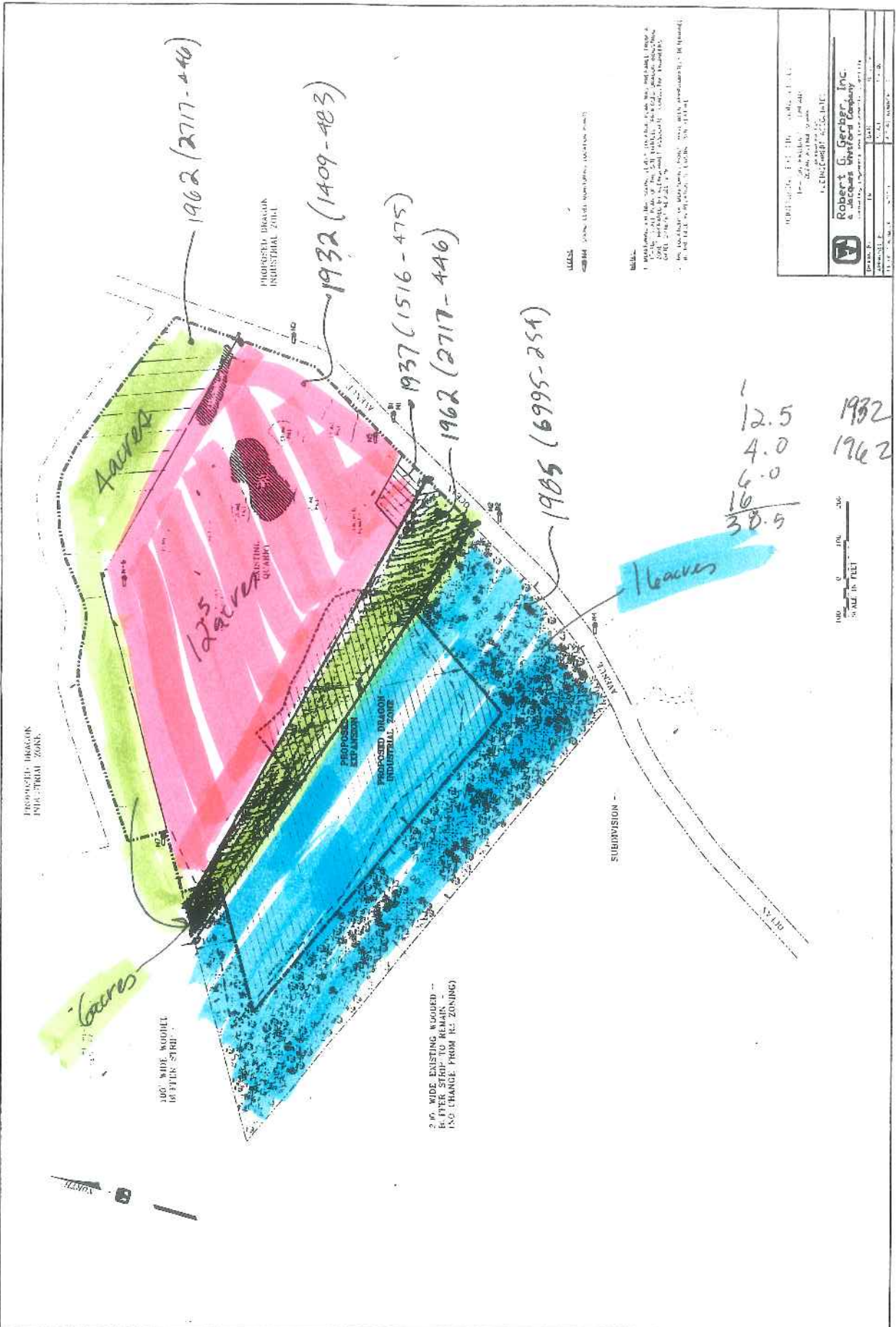
CSN

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Based on our research in the Cumberland County Registry of Deeds, I offer the following history of the Dragon Products' site:

1. In 1932, Joseph Cook acquired 12.5 acres of land on Ocean Avenue in the same general area of the existing concrete manufacturing facility and conveyed it to Cook & Company, Inc. by the deed recorded in Book 1409, Page 483.
2. In 1937, Cook & Company, Inc. acquired a 150 foot by 100 foot parcel in the same general area of the existing manufacturing plant by the deed recorded in Book 1516, Page 475.
3. In 1962, Cook & Company, Inc. acquired an additional 4 acres on Ocean Avenue between its 1932 site and the road to the City dump and also an additional 6 acres lot next to its concrete plant, by the deed recorded in Book 2717, Page 446.
4. In 1968, Cook & Company, Inc. conveyed all of its property to The Cook Concrete Company, by the deed recorded in Book 3064, Page 756.
5. In 1985, Farland Realty, Inc. (a corporation related to the Cook Concrete Company) acquired 16 acres on Ocean Avenue adjacent to the existing mining operation by the deed recorded in Book 6995, Page 254. The parcel was transferred to The Cook Concrete Company in 1991 by the deed recorded in Book 9472, Page 330.
6. In 1991 the Cook Concrete Company conveyed its entire 38.4 acre site to Dragon Products Company, Inc. by the deed recorded in Book 9472, Page 348. Also in 1991, Farland Realty conveyed the residence and lot across the street by the deed recorded in Book 9473, Page 1.

Most of the proposed stone mining activity is located on the parcels acquired in 1962 and in 1985. A plan showing these parcels is attached.



PROPOSED DRAGON INDUSTRIAL ZONE

100' WIDE MOBILE OFFICE STRIP

100' WIDE MOBILE OFFICE STRIP

20' WIDE EXISTING MOBILE OFFICE STRIP (NO CHANGE FROM RE ZONING)

PROPOSED DRAGON INDUSTRIAL ZONE

PROPOSED DRAGON INDUSTRIAL ZONE EXPANSION

PROPOSED DRAGON INDUSTRIAL ZONE

SUBDIVISION

12.5  
4.0  
6.0  
16  
38.5

0 100 200  
SCALE IN FEET

1932  
1962

1962 (2717-446)

1932 (1409-483)

1937 (1516-475)

1962 (2717-446)

1985 (6995-251)

LEGEND

1. PROPOSED DRAGON INDUSTRIAL ZONE EXPANSION  
2. PROPOSED DRAGON INDUSTRIAL ZONE  
3. EXISTING MOBILE OFFICE STRIP  
4. EXISTING MOBILE OFFICE STRIP (NO CHANGE FROM RE ZONING)

ROBERT G. GERBER, INC. & JACQUES WHISTLER COMPANY  
12000 W. 10TH AVENUE, SUITE 100  
DENVER, COLORADO 80231  
TELEPHONE: 333-1234

**Robert G. Gerber, Inc.**  
**& Jacques Whistler Company**  
Professional Engineers and Surveyors  
No. 10000  
No. 10000  
No. 10000

**AGREEMENT BETWEEN  
CITY OF PORTLAND  
AND  
DRAGON PRODUCTS, INC.**

**AGREEMENT** made this      day of      , 1998 by and between the **CITY OF PORTLAND**, a body corporate and politic, located in Cumberland County and State of Maine (hereinafter the "**CITY**") and **DRAGON PRODUCTS, INC.**, a corporation with a business address of 38 Preble Street, P.O. Box 1521, Portland, Maine 04104 (hereinafter "**DRAGON**").

**W I T N E S S E T H:**

**WHEREAS**, **DRAGON** did request a rezoning of property located at Ocean Avenue, in Portland, in order to permit the expansion of its existing legally nonconforming mining operation and on the site of its legally nonconforming cement plant; and

**WHEREAS**, the Planning Board of the City of Portland, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberation thereon, recommended the rezoning of the property as aforesaid, subject, however, to certain conditions; and

**WHEREAS**, the **CITY** by and through its City Council has determined that said rezoning would be pursuant to and consistent with the **CITY'S** comprehensive land use plan and consistent with the existing and permitted uses within the original zone; and



WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose by agreement the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the CITY authorized the execution of this Agreement on \_\_\_\_\_, 1998;

NOW, THEREFORE, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The CITY shall amend the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49 of the Portland City Code, by adopting the map change amendment shown on Attachment 1.
2. The property shall be developed substantially in accordance with the site plan and elevations shown on Attachment 2; provided, however, that such plan and elevations shall be subject to full site plan review by the Planning Board, if required by City ordinances.
3. DRAGON shall be authorized to establish and maintain only those uses or any combination of the uses listed below:
  - a. Mining of stone for use in manufacture of concrete on the site, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth herein and established by State and Federal law.
  - b. Concrete manufacture and processing.
  - c. Storage of materials utilized in the manufacturing allowed on the site, material manufactured on the site and related machinery and equipment, provided that such storage is limited to the areas shown on

Attachment 2. Rock storage shall be relocated from its current site to the areas shown on Attachment 2.

- d. The buffer strip shown on Attachment 2 shall remain in its existing natural condition.
4. DRAGON shall relocate the rock crusher from its current location to the rear of the site, as indicated on Attachment 2.
5. DRAGON shall relocate the conveyor belt to the concrete plant to the rear of the site, as indicated on Attachment 2, within five years of the date of this Agreement.
6. DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. All blasting on the site shall occur between the hours of 7:00 a.m. and 4:00 p.m. and between the months of March and November.
7. DRAGON shall hose down trucks on the site to reduce the amount of debris and residue tracked on the street.
8. DRAGON agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including but not limited to blasting, as set forth in 38 M.R.S.A. §§490-W to 490-EE.
9. DRAGON shall meet all standards contained in sections 14-265, 14-266, and 14-267, except as follows:
  - a. No new fence shall be required pursuant to 14-266(6).
  - b. Outside storage of stone shall not be required to meet the standards of §14-266(10)
  - c. Vibration standards in 14-267(3) shall not apply to blasting.
  - d. Noise standards in §14-267(2) shall not apply to blasting.
  - e. The concrete plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage, but shall be limited to 65 decibels of noise as measured at property lines in accordance with the procedures

set forth in §14-267(2).

10. **DRAGON** shall maintain ownership of all property currently owned by it at this site and also the parcel owned by Dragon and located across Ocean Avenue from this site, more particularly described as Tax Map 418, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

The above stated restrictions, provisions and conditions are an essential part of the rezoning, shall run with the subject premises, shall bind **DRAGON**, its successors and assigns, as permitted by this Agreement, of said property or any part thereof or interest therein, and any party in possession or occupancy of said property or any part thereof, and shall inure to the benefit of and be enforceable by the **CITY**, by and through its duly authorized representatives.

If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

Except as expressly modified herein, the use and occupancy of the subject premises shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

In the event that **DRAGON** or any successor fails to continue to utilize the property in accordance with this Agreement, or in the

event of a breach of any condition(s) set forth in this Agreement, the Planning Board shall have the authority, after hearing, to resolve the issue resulting in the breach or the failure to operate. The resolution may include a recommendation to the City Council that the site be rezoned to R-3 or any successor zone and that this Agreement be terminated, requiring a cessation of the blasting use permitted under this terms of this Agreement. However, the termination of the contract will not require cessation of the concrete and cement processing and manufacturing uses located on the site prior to the date of execution of this contract.

WITNESS:

\_\_\_\_\_

CITY OF PORTLAND

By \_\_\_\_\_  
Robert B. Ganley  
Its City Manager

WITNESS:

\_\_\_\_\_

DRAGON PRODUCTS, INC.

By: \_\_\_\_\_

Its \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss.

, 1998

Personally appeared the above-named Robert B. Ganley, in his capacity as City Manager, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the City of Portland.

Before me,

OCEANAV.REZ.CON  
02.26.98

Notary Public/Attorney at Law

STATE OF MAINE  
CUMBERLAND, ss.

, 1998

Personally appeared the above-named \_\_\_\_\_, in his/her said capacity and acknowledged the foregoing instrument to be his/her free act and deed and the free act and deed of Dragon Products, Inc.

Before me,

Notary Public/Attorney at Law

- (3) Implement the plan in accordance with the schedule approved by the building authority.
- b. *Ambient odor limits:* The maximum ambient intensity standard for odors generated by uses located in the I-M zones shall not exceed the following levels when the odor is measured in the zone indicated:
- 4.0 in any industrial or business zone for odors resulting from any industrial use.
- 3.0 in any residential zone for odors resulting from any industrial use.
- (7) *Smoke:* Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the Ringelmann chart.
- (8) *Emissions:* All emissions shall be made in accordance with all applicable state and federal regulations.
- (9) *Radiation:* Radiation at a site shall comply with all applicable state and federal regulations.
- (10) *Discharge into sewers:* No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.
- (11) *Lighting:* All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties.
- (12) *Traffic:* Development in the I-M, I-Ma and I-Mb zones shall utilize to the greatest extent possible arterial streets as delineated on the Maine Department of Transportation Map, a copy of which is on file in the Department of Planning and Urban Development.

(Ord. No. 164-97, § 7, 1-6-97)

**Secs. 14-253—14-260. Reserved.**

#### DIVISION 15. I-H AND I-Hb INDUSTRIAL ZONES\*

##### **Sec. 14-261. Purpose.**

The high impact industrial zones are intended to provide areas suitable for higher impact industrial uses than are permitted in other industrial zones.

\***Editor's note**—Ord. No. 164-97, § 8, passed Jan. 6, 1997, repealed div. 15, §§ 14-261—14-266 of this article and enacted new provisions as herein set out. Formerly, such provisions pertained to the I-3 and I-3b industrial zones and derived from §§ 602.13.A—602.13.F of the 1968 Code as amended by Ord. No. 499-74, § 5, adopted Aug. 19, 1974; Ord. No. 334-76, §§ 4—6, adopted Jul. 7, 1976; Ord. No. 198-88, adopted Nov. 21, 1988; Ord. No. 201-88, adopted Nov. 21, 1988; Ord. No. 330-90, § 3, adopted May 7, 1990; Ord. No. 15-92, § 19, adopted Jun. 15, 1992; and Ord. No. 193A-93, §§ 3, 4, adopted Feb. 17, 1993.

Due to the intensity of use, the I-H zones are intended for uses which may require extensive outdoor storage and usage and may utilize heavy equipment. Processes may require separation from residential or sensitive environmental areas. The I-H zones are separated from other nonindustrial uses as well as natural or constructed features.

High impact industrial uses will be of a higher intensity, with a greater lot coverage, than the other zones. Due to the intensity of uses, the performance standards will allow for the higher intensity of use.

(Ord. No. 164-97, § 8, 1-6-97)

**Sec. 14-262. Permitted uses.**

The following uses are permitted in the high impact industrial zone and the I-Hb zone:

- (1) Low impact industrial uses, including but not limited to bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, musical instruments, precision instruments, watchmakers, toys and sporting goods, wood products, jewelry, assembly of electrical components, tool and die shops and the packaging of food.
- (2) Research and development.
- (3) Wholesale trade.
- (4) Warehousing and distribution facilities.
- (5) Intermodal transportation facilities and transportation terminals.
- (6) Repair services, including all types of automotive repair services.
- (7) High impact industrial uses.
- (8) Building contractors and construction services.
- (9) Plant and tree nurseries, including associated recycling activities.
- (10) Lumber yards.
- (11) Fish waste processing facility, provided that it has received all required licenses and is in compliance with all applicable licensing requirements.
- (12) Commercial kitchens or other food preparation, provided that the food is not prepared for service on the premises.
- (13) Recycling facilities.
- (14) Food and seafood processing.
- (15) Dairies.
- (16) Municipal or regional solid waste disposal facilities, provided that all disposal activities are carried out within an enclosed structure.
- (17) Utility substations.

- (18) Correctional prerelease facilities for up to twelve (12) persons, plus staff, serving a primary clientele of parolees or persons in correctional prerelease programs, provided that:
- a. No correctional prerelease facility shall be located within one thousand (1,000) feet of another, as measured in a radius from the center of the lot;
  - b. Such facilities shall not be permitted in the I-Hb zone;
  - c. If a facility requires a state or federal license, staffing of the facility shall be as required by such license. If a facility does not require state or federal licenses, there shall be a minimum of one (1) staff person for every ten (10) residents or fraction thereof; and
  - d. The facility shall provide twenty-four-hour supervision of program participants.
- (Ord. No. 164-97, § 8, 1-6-97)

**Sec. 14-263. Prohibited uses.**

Uses that are not expressly enumerated herein as permitted uses are prohibited. Those uses that are prohibited shall include, but are not limited to, the following:

- (1) Residential uses.
- (2) Retail trade that is not ancillary to a permitted use.
- (3) Restaurant uses.
- (4) Junk yards.
- (5) Amusement parks.
- (6) Refining of petroleum or its products, including tar distillation.
- (7) Distillation of bones; fat rendering; glue, soap, or fertilizer manufacture, except that fish waste processing may be permitted as set forth in section 14-262.
- (8) Dumping, disposal, incineration, or reduction of garbage, sewage, offal, dead animals, or refuse.
- (9) Stockyard or slaughtering of animals.
- (10) Smelting of iron, copper, tin, zinc, or any other ore.
- (11) Manufacture of explosives or fireworks.
- (12) Coal distillation or coke ovens.
- (13) Creosote treatment.
- (14) Drop forging.
- (15) Steel mills or furnaces.
- (16) Coal- or coke-fired kilns.
- (17) Used tire storage.



- (18) Extraction of raw materials.
  - (19) Concert halls or dance halls.
  - (20) Banquet facilities.
- (Ord. No. 164-97, § 8, 1-6-97)

**Sec. 14-264. Contract or conditional zoning.**

A conditional or contract rezoning shall only be approved if, after public hearing and opportunity for public comment, the reviewing body finds that the applicant has carried the burden of proof to show that the proposed development meets the following standards:

- (1) The proposed development is consistent with the comprehensive plan.
- (2) The proposed development is consistent with the purposes of this zone.
- (3) The proposed development is designed and operated so that it will prevent undue adverse environmental impacts, substantial diminution of the value or utility of neighboring structures, or significant hazards to the health or safety of neighboring residents by controlling noise levels, emissions, traffic, lighting, odors, and any other potential negative impacts of the proposal.
- (4) All plans must include complete information of processes, materials or methods of storage to be used by the development and shall specify how hazardous impacts to neighboring properties will be prevented.

(Ord. No. 164-97, § 8, 1-6-97)

**Sec. 14-265. Dimensional requirements.**

- (1) *Minimum lot size:*
  - a. Correctional prerelease facilities: Ten thousand (10,000) square feet.
  - b. Other uses: None.
- (2) *Maximum impervious surface ratio:* I-H zone: Eighty-five (85) percent. I-Hb zone: One hundred (100) percent.
- (3) *Maximum building height:* Seventy-five (75) feet.
- (4) *Minimum side yards:* Principal and accessory structures in the I-H zone: Thirty-five (35) feet. Principal and accessory structures in the I-Hb zone: None.
- (5) *Minimum rear yards:* Principal and accessory structures in the I-H zone: Thirty-five (35) feet. Principal and accessory structures in the I-Hb zone: None.
- (6) *Minimum front yard:* Principal and accessory structures in the I-H zone: Twenty-five (25) feet. Principal and accessory structures in the I-Hb zone: None.
- (7) *Minimum street frontage:* Sixty (60) feet.

(8) *Pavement setback from lot boundaries:* Ten (10) feet.  
(Ord. No. 164-97, § 8, 1-6-97)

**Sec. 14-266. Other requirements.**

- (1) Off-street parking shall meet the requirements of division 20 of this article.
- (2) Off-street loading shall meet the requirements of division 21 of this article.
- (3) Signs shall be subject to the provisions of division 22 of this article.
- (4) *Shoreland and floodplain management regulations:* Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5 of this article.
- (5) All uses shall be operated within a fully enclosed structure, except for those customarily operated in open air.
- (6) Any storage of new materials, finished products, or related equipment must be suitably screened from the public way and from abutting nonindustrial use properties by a solid fence at least five (5) feet in height, or by a solid evergreen planting strip.
- (7) All waste shall be stored in covered containers that do not leak or otherwise permit liquids or solids to escape from the container.
- (8) All food processing waste shall be stored within a completely enclosed structure and if not refrigerated shall be removed from the site in an enclosed container within forty-eight (48) hours of its generation. All enclosed and exterior food processing waste storage areas shall be cleaned and sanitized on a regular basis.
- (9) Outdoor storage of refuse, debris or material awaiting reuse shall be in an appropriate container or located within a designated, screened area.
- (10) Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust, or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted between the front of any building on the site and the street, except for storage for plant and tree nurseries or lumber yards.  
(Ord. No. 164-97, § 8, 1-6-97)

**Sec. 14-267. Performance standards.**

Uses in the I-H and I-Hb zones shall meet the following standards:

- (1) *Required landscaping:* Where a front yard abuts an arterial or a major collector street, it shall be landscaped. Rear yards, side yards and the perimeter of any parking area for greater than fifteen (15) vehicles shall be landscaped if visible from a street, public open space or residential zone.

(2) *Noise:*a. *Definitions:*

- i. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.
- ii. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

- b. *Measurement:* Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ<sub>1</sub>).

- c. *Maximum permissible sound levels:* The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

- i. Seventy-five (75) dBA between the hours of 7:00 a.m. and 10:00 p.m.
- ii. Fifty-five (55) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

d. *Exemptions:*

- i. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (1)c. of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.
- ii. The following uses and activities shall also be exempt from the requirements of subsection (1)c. of this section:
  - (a) The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.
  - (b) Traffic noise on public roads or noise created by airplanes and railroads.
  - (c) Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.

- (d) Emergency construction or repair work by public utilities, at any hour.
  - (e) Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.
- (2) *Electromagnetic interference*: There shall be no electromagnetic interference that adversely affects the operation of any equipment other than that belonging to the creator of such interference, or that does not conform to the regulations of the Federal Communications Commission.
- (3) *Vibrations*: Any use creating earthshaking vibrations shall be controlled in such a manner as to prevent transmission beyond lot lines of vibrations causing a displacement of .003 or greater on one (1) inch, as measured by a vibrograph or similar instrument at the property boundaries.
- (4) *Glare, heat*: Any use shall be in an enclosed structure in such a manner that glare and heat shall be imperceptible from neighboring properties.
- (5) *Discharge of toxic or noxious matter*: All discharges of toxic or noxious matter shall be made in accordance with all applicable state and federal regulations.
- (6) *Odor*: It shall be a violation of this chapter to create an odor nuisance.
- a. *Determination of odor nuisance*: An odor nuisance shall be considered to exist when ten (10) confirmed complaints occur in an area within two (2) separate twenty-four-hour periods. The ten (10) confirmed complaints must originate from ten (10) different households in an area zoned residential or from ten (10) different individuals in a commercial or industrial facility. The building authority shall only respond to a complainant who confirms that the odor is detectable at the time of the actual complaint. In order to confirm a complaint, the building authority or its designee shall first determine that an odor is detectable in the area of the complaint. The building authority or its designee shall interview the complainant to verify that the detectable odor is in fact the odor that resulted in the complaint. If the complainant verifies the odor as the source of the complaint, then the building authority shall notify the owner or operator of the alleged odor source either in person or by telephone within one (1) working day, with a written confirmation within seven (7) working days of the complaint. In the event that the building authority is unable to contact the owner or operator of the alleged odor source in person or by telephone within one (1) working day, then the building authority shall send written notice to the operator within seven (7) working days of the complaint.

In the event that ten (10) complaints are confirmed as set forth in subsection (1) in two (2) separate twenty-four-hour periods within a ninety-day period, the building authority shall cause a certified odor inspector to investigate any odor complaints received in the next thirty (30) days following the receipt of the tenth confirmed complaint from the second twenty-four-hour period. If the odors

remain under the ambient intensity standard as established in this subsection for the next thirty (30) days, then a new odor nuisance must be established after that time in accordance with the requirements of this section. The certified odor inspector shall do the following in response to a complaint under this section:

1. Verify that an odor is detectable in the area of the complaint and confirm that it is the odor that resulted in the complaint;
2. Quantify the intensity of the odor on the eight-point n-butanol intensity scale as defined in regulations promulgated by the director of the planning authority to establish training and technical standards to support this section; and
3. Track the odor to its source.

When the certified odor inspector determines that a violation has occurred because an odor has exceeded the maximum ambient odor levels set forth in this section, the building authority shall notify the owner or operator either by telephone or in person of the violation within one (1) working day of the violation. The building authority shall confirm this notification in writing within seven (7) working days of this initial notice. In the event that the building authority is unable to contact the owner or operator by telephone or in person within the required time period, then it will send written notification within seven (7) working days of the violation.

Upon receipt of the written notice of violation, the owner or operator of the odor source shall do the following:

- (1) Implement odor reduction procedures immediately upon notification by the building authority that the facility has violated this section wherever odor reduction can be achieved by operational or procedural changes at the facility;
- (2) Submit to the building authority, within thirty (30) days of the written notice of violation, an odor reduction plan which is designed to reduce ambient odors attributable to emissions from that source to the maximum allowable intensity for that zone. The plan shall include a detailed summary of the measures that the owner or operator will take to mitigate the community annoyance and estimated dates for completion of those measures. In the event that it will take longer than thirty (30) days to develop the odor reduction plan, the owner or operator of the facility shall submit within the thirty-day time period a schedule for the development of the odor reduction plan. The building authority shall review this plan to determine whether it will be adequate to resolve the odor nuisance in a reasonable time period; and
- (3) Implement the plan in accordance with the schedule approved by the building authority.

- b. *Ambient odor limits:* The maximum ambient intensity standard for odors generated by uses located in the I-H zones shall not exceed the following levels when the odor is measured in the zone indicated:

4.0 in any industrial or business zone for odors resulting from any industrial use.

3.0 in any residential zone for odors resulting from any industrial use.

- (7) *Smoke:* Discharges of smoke shall not exceed opacity percentage of forty (40) percent or number 2 on the Ringelmann chart.
- (8) *Emissions:* All emissions shall be made in accordance with all applicable state and federal regulations.
- (9) *Radiation:* Radiation at a site shall comply with all applicable state and federal regulations.
- (10) *Discharge into sewers:* No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the health authority or by the public works authority.
- (11) *Lighting:* All lighting shall be designed and installed with cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties.

(Ord. No. 164-97, § 8, 1-6-97)

Secs. 14-268—14-275. Reserved.

#### DIVISIONS 16, 17. RESERVED\*

Secs. 14-276—14-312. Reserved.

\**Editor's note*—Ord. No. 164-97, § 9, passed Jan. 6, 1997, repealed divs. 16 and 17 of this article, which pertained to the I-4 industrial zone and the I-P industrial park zone, respectively. Formerly, such divisions consisted of substantive §§ 14-276—14-282, 14-291—14-297 and derived from 602.13B.A—602.13B.F, 602.13B.H, 602.10A.A—602.10A.E and 602.10A.H of the 1968 Code as amended by Ord. No. 536-74, § 2, adopted Aug. 19, 1974; Ord. No. 334-76, §§ 6, 7, adopted Jul. 7, 1976; Ord. No. 159-87, adopted Nov. 2, 1987; Ord. No. 235-88, adopted Feb. 1, 1988; Ord. No. 330-90, §§ 4, 5, adopted May 7, 1990; Ord. No. 15-92, §§ 20, 21, adopted Jun. 15, 1992; and Ord. No. 193A-93, § 5, adopted Feb. 17, 1993.

PERFORMANCE STANDARDS FOR QUARRIES

38 MRSA §§490-W TO 490-EE

*Notes Concerning the Text  
July 4, 1996*

*The following text of Article 8 (Performance Standards for Quarries) includes amendments made by the One Hundredth and Seventeenth Legislature, Second Regular Session. The table of contents and footnotes have been added to this document by the Department of Environmental Protection and are not part of the statutory text.*

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**ARTICLE 8-A**  
**PERFORMANCE STANDARDS FOR QUARRIES**

**§490-W. Definitions**

As used in this article, unless the context otherwise indicates, the following terms have the following meanings.

1. **Affected land.** "Affected land" means all reclaimed and unreclaimed land, land that has or will have the overburden removed, land on which stumps, spoil or other solid waste has or will be deposited and storage areas or other land, except natural buffer strips, that will be or has been used in connection with a quarry.

2. **Airblast.** "Airblast" means an atmospheric compression wave resulting from the detonation of explosives, whether resulting from the motion of blasted materials or the expansion of gases from the explosion.

3. **Blaster.** "Blaster" means a person qualified to be in charge of or responsible for the loading and firing of a blast.

✓ 4. **Blasting.** "Blasting" means the use of explosives to break up or otherwise aid in the extraction or removal of a rock or other consolidated natural formation.

✓ 5. **Blast site.** "Blast site" means the area where explosive material is handled during the loading of drilled blastholes, including the perimeter formed by the loaded blastholes and 50 feet in all directions from loaded blastholes.

6. **Detonating cord.** "Detonating cord" means a flexible cord containing a center core of high explosives that may be used to initiate other explosives.

7. **Explosive.** "Explosive" means any chemical compound or other chemical substance that contains oxidizing or combustible materials used for the purpose of producing an explosion intended to break or move rock, earth or other materials.

8. **Flyrock.** "Flyrock" means rock that is propelled through the air or across the ground as a result of blasting and that leaves the blast area.

9. **Matting.** "Matting" means a covering placed over load holes and adjacent areas in order to minimize generation of flyrock and limit airblast effects.

✓ 10. **Natural buffer strip.** "Natural buffer strip" means an undisturbed area or belt of land that is covered with trees or other vegetation.

**11. Passenger car equivalents at peak hour.** "Passenger car equivalents at peak hour" means the number of passenger cars, or, in the case of nonpassenger vehicles, the number of passenger cars that would be displaced by nonpassenger vehicles, that pass through an intersection or on a roadway under prevailing roadway and traffic conditions at that hour of the day during which traffic volume generated by the development is higher than the volume during any other hour of the day. For purpose of this article, one tractor-trailer combination is the equivalent of 2 passenger cars.

**12. Peak particle velocity.** "Peak particle velocity" means the maximum rate of ground movement measured by any of the 3 mutually perpendicular components of ground motion.

**13. Preblast survey.** "Preblast survey" means documentation, prior to the initiation of blasting, of the condition of buildings, structures, wells or other infrastructures; protected natural resources; historic sites; and unusual natural areas.

**14. Private drinking water supply.** "Private drinking water supply" means a surface water supply, a dug well, a spring or a hole drilled, driven or bored into the earth that is used to extract drinking water for human consumption and that is not part of a public drinking water supply.

**15. Production blasting.** "Production blasting" means blasting conducted for the purpose of extracting or removing natural materials for commercial sale or beneficiation.

**16. Public drinking water source.** "Public drinking water source " means a groundwater well or a surface water source that directly or indirectly serves a water distribution system that has at least 15 service connections or regularly services an average of at least 25 individuals daily at least 60 days of the year.

✓ **17. Quarry.** "Quarry" means a place where rock is excavated.

**18. Reclamation.** "Reclamation" means the rehabilitation of the area of land affected by mining, including, but not limited to, the stabilization of slopes and creation of safety benches, the planting of forests, the seeding of grasses and legumes for grazing purposes, the planting of crops for harvest and the enhancement of wildlife and aquatic habitat and aquatic resources. "Reclamation" does not include the filling in of pits and the filling or sealing of shafts and underground workings with solid materials unless necessary for the protection of groundwater or for reasons of safety.

**19. Regulator.** "Regulator" means:

A. For a quarry located wholly within a municipality that is registered under section 490-DD to enforce this article, the municipality; and

B. For all other quarries, the Department of Environmental Protection.

20. **Rock.** "Rock" means a hard, nonmetallic material that requires cutting, blasting or similar methods of forced extraction.

21. **Stemming.** "Stemming" means inert material used in a blasthole to confine the gaseous products of detonation.

22. **Surface blasting.** "Surface blasting" means any blasting for which the blast area lies at the surface of the ground.

23. **Underground production blasting.** "Underground production blasting" means a blasting operation carried out beneath the surface of the ground by means of shafts, declines, adits or other openings leading to the natural material being mined or extracted.

#### **§490-X. Applicability**

This article applies to any quarry that is more than one acre in size, including reclaimed and unreclaimed areas, or at which underground production blasting is proposed.

The article does not apply to a quarry located wholly within the jurisdiction of the Maine Land Use Regulation Commission.

This article does not apply to an excavation or grading preliminary to a construction project, unless intended to circumvent this article.

A person with a valid permit for a quarry under article 6 must operate that quarry in compliance with the terms and conditions of that permit. Any modification of the permit must be in conformance with section 484. A person with a permit under article 6 may file a notice of intent to comply with this article. The permit issued under article 6 lapses as of the date a complete notice of intent is filed with the department. If the permittee chooses to substitute a notification pursuant to this article, all terms and conditions that applied to the permit issued pursuant to article 6 are incorporated into the notification approved pursuant to this article.

#### **§490-Y. Notice of intent to comply**

Except as provided in section 484-A, a person intending to create or operate a quarry under this article must file a notice of intent to comply before the total area of excavation of rock or overburden on the parcel exceeds one acre. Both reclaimed and unreclaimed areas are added together in determining whether this one-acre threshold is exceeded. A notice filed under this section must be complete, submitted on forms approved by the department and mailed to the ① municipality where the quarry is located, ② the department, the ③ Maine Historic Preservation Commission and each abutting property owner. The notice that is mailed to the department must be sent by certified mail, return receipt requested. Upon receiving the postal receipt, the owner or operator may commence operation of the quarry.

A notice of intent to comply is not complete unless it includes the following:

1. **Name, address and telephone number.** The name, mailing address and telephone number of the owner of the quarry and, if different from the owner, the operator of the quarry;

2. **Map and site plan.** A location map and site plan drawn to scale showing property boundaries, stockpile areas, existing reclaimed and unreclaimed lands, proposed maximum acreage of all affected lands, all applicable private drinking water supplies or public drinking water sources and all existing or proposed solid waste disposal areas;

3. **Parcel description.** A description of the parcel including size and deed description;

4. **Legal interest.** A copy of the lease or other document showing that an operator who is not the owner has a legal right to excavate on the property. Stumpage information does not have to be shown;

5. **Information on abutters.** The names and addresses of abutting property owners;

6. **Signed statement.** A statement signed and dated by the owner or operator certifying that the quarry will be operated in compliance with this article; and

7. **Fees.** A fee paid to the department as provided by section 490-EE.

If the department determines that a notice filed under this section is not complete, the department must notify the owner or operator no later than 45 days after receiving the notice.

#### **§490-Z. Performance standards for quarries**

1. **Significant wildlife habitat.** Affected land may not be located in a significant wildlife habitat as defined in section 480-B, subsection 10 or in an area listed pursuant to the Natural Areas Program, Title 5, section 13076. The department may not grant a variance from the provisions of this subsection.

2. **Solid waste.** Solid waste, including stumps, wood waste and land-clearing debris generated on the affected land must be disposed of in accordance with chapter 13, including any rules adopted to implement those laws. The department may not grant a variance from the provisions of this subsection.

3. **Groundwater protection.** To ensure adequate groundwater protection, the following setback requirements must be met.

A. A 200-foot separation must be maintained between an excavation and a private drinking water supply that is point driven or dug and was in existence prior to the excavation.

B. A 100-foot separation must be maintained between an excavation and a private drinking water supply that is drilled into saturated bedrock and was in existence prior to the excavation.

C. Separation must be maintained between an excavation and a public drinking water source as follows:

(1) For systems serving a population of 500 persons or less, the minimum separation must be 300 feet;

(2) For systems serving a population of 501 persons up to 1,000 persons, the separation must be 500 feet;

(3) For systems serving a population of more than 1,000 persons, the separation must be 1,000 feet; and ] ?

(4) For any system that holds a valid filtration waiver in accordance with the federal Safe Drinking Water Act, 42 United States Code, Sections 300f to 300j-26 (1988), the separation must be 1,000 feet.

D. Refueling operations, oil changes, other maintenance activities requiring the handling of fuels, petroleum products and hydraulic fluids and other on-site activity involving storage or use of products that, if spilled, may contaminate groundwater, must be conducted in accordance with the department's spill prevention, control and countermeasures plan. Petroleum products and other substances that may contaminate groundwater must be stored and handled over impervious surfaces that are designed to contain spills. The spill prevention, control and countermeasures plan must be posted at the site.

E. In the event of excavation below the seasonal high water table, a 300-foot separation must be maintained between the limit of excavation and any predevelopment private drinking water supply and a 1000-foot separation must be maintained between the limit of excavation and any public drinking water source or area previously designated for potential use as a public drinking water source by a municipality or private water company.

The department may grant a variance from the provisions of paragraph C upon consultation with the persons or entity that controls the public drinking water supply affected by the excavation. The department may not grant a waiver from the provisions of paragraph A, B or D.

Excavation below the seasonal highwater table of an area previously designated for potential use as a public drinking water source by a municipality or private water company is prohibited. The department may grant a variance allowing excavation below the seasonal highwater table if the applicant demonstrates that the yield of groundwater flow to protected waters or wetlands or public drinking water sources or private drinking water supplies will not be adversely affected by the excavation.

In the event of excavation below the seasonal highwater table, the operator of a mining activity that affects by excavation activities a public drinking water source or private drinking water supply by contamination, interruption or diminution must restore or replace the affected water supply with an alternate source of water, adequate in quantity and quality for the purpose served by the supply. This provision is not intended to replace any independent action that a person may have whose water supply is affected by a mining activity.

4. **Natural buffer strip.** Existing vegetation within a natural buffer strip may not be removed. If vegetation within the natural buffer strip has been removed or disturbed by the excavation or activities related to operation of a quarry before submission of a notice of intent to comply, that vegetation must be reestablished as soon as practicable after filing the notice of intent to comply. The department may not grant a variance from the provisions of this subsection.

5. **Protected natural resources.** A natural buffer strip must be maintained between the working edge of an excavation and a river, stream, brook, great pond or coastal wetland as defined in section 480-B. A natural buffer strip must also be maintained between the working edge of an excavation and certain freshwater wetlands as defined in section 480-B and having the characteristics listed in paragraph B. Excavation activities conducted within 100 feet of a protected natural resource must comply with the applicable permit requirements under article 5-A. The width requirements for natural buffer strips are as follows.

A. A natural buffer strip at least 100 feet wide must be maintained between the working edge of the excavation and the normal high water line of a great pond classified as GPA or a river flowing to a great pond classified as GPA.

B. A natural buffer strip at least 75 feet wide must be maintained between the working edge of the excavation and a body of water other than as described in paragraph A, a river, stream or brook, coastal wetland or significant wildlife habitat contained within a freshwater wetland consisting of or containing:

(1) Under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or

(2) Peat lands dominated by shrubs, sedges and sphagnum moss.

For purposes of this subsection, the width of a natural buffer strip is measured from the upland edge of a floodplain wetland. If no floodplain wetlands are present, the width is measured from the normal high water mark of the river, stream or brook. The width is measured from the normal high water mark of a great pond and upland edge of a freshwater or coastal wetland.

The department may not grant a variance from this subsection.

6. **Roads.** A natural buffer strip must be maintained between the working edge of an excavation and a road as follows.

A. A natural buffer strip at least 150 feet wide must be maintained between the working edge of an excavation and a road designated as a scenic highway by the Department of Transportation.

B. A natural buffer strip at least 100 feet wide must be maintained between the working edge of the excavation and any other public road.

C. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and a private road or a right-of-way. If a private road is contained within a wider right-of-way, the buffer is measured from the edge of the right-of-way. The width of the natural buffer strip adjacent to a private road may be reduced if the applicant receives written permission from the persons having a right-of-way over the private road.

The department may not grant a variance from the provisions of paragraph A or C. The department may grant a variance from paragraph B if the variance does not result in the natural buffer strip being reduced to less than 50 feet between the working edge of the excavation and any road and if the owner or operator installs visual screening and safety measures as required by the department.

A distance specified in this subsection is measured from the outside edge of the shoulder of the road unless otherwise specifically provided.

**7. Property boundary.** A natural buffer strip at least 100 feet wide must be maintained between an excavation and any property boundary. This distance may be reduced to 10 feet with the written permission of the affected abutting property owner or owners, except that the distance may not be reduced to less than 25 feet from the boundary of a cemetery or burial ground. The natural buffer strip between quarries owned by abutting owners may be eliminated with the abutter's written permission if the elimination of this natural buffer strip does not increase the runoff from either excavation across the property boundary. All property boundaries must be identified in the field by markings such as metal posts, stakes, flagging or blazed trees. The department may not grant a variance from the provisions of this subsection.

**8. Erosion and sedimentation control.** All reclaimed and unreclaimed areas, except for access roads, must be naturally internally drained at all times unless a variance is obtained from the department. Stockpiles consisting of topsoil to be used for reclamation must be seeded, mulched or otherwise temporarily stabilized.

A. Sediment may not leave the parcel or enter a protected natural resource.

B. Grubbed areas not internally drained must be stabilized.

C. Erosion and sedimentation control for access roads must be conducted in accordance with the department's best management practices for erosion and sedimentation control.

The department may not grant a variance from the provisions of paragraph A, B or C.

**9. Surface water protection and storm water management.** Surface water discharges from areas not required to be naturally internally drained may not be increased as a result of storm water runoff from storms up to a level of a 25-year, 24-hour storm. Accumulated water from precipitation must be put into sheet flow and the discharge point must be directed to an undisturbed natural buffer strip. The discharge point must be at least 250 feet away from a protected natural resource. The slope of the discharge area may not exceed 5%.

Grading or other construction activity on the site may not alter natural drainageways so that the drainage, other than that which occurred before development, adversely affects an adjacent parcel of land or so that the drainageways flowing from an adjacent parcel of land to the parcel are impeded.

Structures such as detention ponds, retention ponds and undersized culverts may not be used to meet the standard in this subsection unless a variance is obtained from the department.

**10. Traffic.** The following provisions govern traffic.

A. Entrances and exits of the quarry must be located, posted and constructed in accordance with standards for roadways in rules adopted by the board. Adequate distances for entering, exiting and stopping must be maintained in accordance with these standards. The department may not grant a variance from the provisions of this subsection. This paragraph is repealed July 1, 1997.

B. Any excavation activity that generates 100 or more passenger car equivalents at peak hour must comply with the applicable permit requirements under article 6. This paragraph takes effect July 1, 1997.

**11. Noise.** Noise levels may not exceed applicable noise limits in rules adopted by the board.

**12. Dust.** Dust generated by activities at a quarry, including dust associated with traffic to and from a quarry, must be controlled by sweeping, paving, watering or other best management practices for control of fugitive emissions. Dust control methods may include calcium chloride as long as the manufacturer's labeling guidelines are followed. The department may not grant a variance from the provisions of this subsection.

**13. Reclamation.** The affected land must be restored to a condition that is similar to or compatible with the conditions that existed before excavation. Reclamation may be conducted in accordance with the department's best management practices for erosion and sedimentation control and must include the following.

A. Highwalls, or quarry faces, must be treated in such a manner as to leave them in a condition that minimizes the possibility of rock falls, slope failures and collapse. A highwall that is loose must be controlled by the use of blasting or scaling, the use of safety benches, the

See  
Article 10  
Re DEP  
Site Act  
Regs.



use of flatter slopes or reduced face heights or the use of benching near the top of the face or rounding the edge of the face.

B. A vegetative cover must be established by seeding or planting within one year of the completion of excavation. Vegetative cover must be established on all affected land, including safety benches, except for quarry walls and flooded areas. Topsoil must be placed, seeded and mulched within 30 days of final grading. Vegetative cover is acceptable if within one year of seeding:

- (1) The planting of trees and shrubs results in a permanent stand or a stand capable of regeneration and succession sufficient to ensure a 75% survival rate; and
- (2) The planting of all material results in permanent 90% ground cover.

Vegetative cover used in reclamation must consist of grasses, legumes, herbaceous or woody plants, shrubs, trees or a mixture of these.

C. All structures, once no longer in use, and all access roads, haul roads and other support roads must be reclaimed.

D. All affected lands must be reclaimed within 2 years after final grading.

E. Topsoil that is stripped or removed must be stockpiled for use in reclaiming disturbed land areas. The department may grant a variance from this paragraph if the applicant demonstrates that the soil is not needed for reclamation purposes.

F. The department may require a bond payable to the State with sureties satisfactory to the department or such other security as the department determines adequately secures compliance with this article, conditioned upon the faithful performance of the requirements set forth in this article. Other security may include a security deposit with the State, an escrow account and agreement, insurance or an irrevocable trust. In determining the amount of the bond or the security, the department shall take into consideration the character and nature of the overburden, the future suitable use of the land involved and the cost of grading and reclamation required. All proceeds of forfeited bonds or other security must be expended by the department for the reclamation of the area for which the bond was posted and any remainder returned to the operator.

G. The board may adopt or amend rules to carry out this subsection, including rules relating to operational or maintenance plans; standards for determining the reclamation period; annual revisions of those plans; limits, terms and conditions on bonds or other security; proof of financial responsibility of a person engaged in excavation activity or the affiliated person who guarantees performance; estimation of reclamation costs; reports on reclamation activities; and the manner of determining when the bond or other security may be discharged.

14. Blasting. The applicant must ensure that the blasting is conducted in accordance with Title 25, section 2441.

A. The owner or operator shall use sufficient stemming, matting or natural protective cover to prevent flyrock from leaving property owned or under control of the owner or operator or from entering protected natural resources or natural buffer strips. Crushed rock or other suitable material must be used for stemming when available; native gravel, drill cuttings or other material may be used for stemming only if no other suitable material is available.

B. The maximum allowable airblast at any inhabited building not owned or controlled by the developer may not exceed 129 decibels peak when measured by an instrument having a flat response (+ or - 3 decibels) over the range of 5 to 200 hertz.

C. The maximum allowable airblast at an uninhabited building not owned or controlled by the developer may not exceed 140 decibels peak when measured by an instrument having a flat response (+ or - 3 decibels) over the range of 5 to 200 hertz.

D. Monitoring of airblast levels is required in all cases for which a preblast survey is required by paragraph F. The department may waive the monitoring requirement if the owner or operator secures the permission of affected property owners to increase allowable airblast levels on their property and the department determines that no protected natural resource will be adversely affected by the increased airblast levels.

E. If a blast is to be initiated by detonating cord, the detonating cord must be covered by crushed rock or other suitable cover to reduce noise and concussion effects.

F. A preblast survey is required for all production blasting and must extend a minimum radius of 2000 feet from the blast site. The preblast survey must document any preexisting damage to structures and buildings and any other physical features within the survey radius that could reasonably be affected by blasting. Assessment of features such as pipes, cables, transmission lines and wells and other water supply systems must be limited to surface conditions and other readily available data, such as well yield and water quality. The preblast survey must be conducted prior to the initiation of blasting at the operation. The owner or operator shall retain a copy of all preblast surveys for at least one year from the date of the last blast on the development site.

(1) The owner or operator is not required to conduct a preblast survey if the department determines that no protected natural resource within the limits of the otherwise required survey is likely to be affected by blasting and production blasting will not occur within 2000 feet of any building not owned or under the control of the developer.

(2) The owner or operator is not required to conduct a preblast survey on properties for which the owner or operator documents the rejection of an offer by registered letter, return receipt requested, to conduct a preblast survey. Any person owning a building within a preblast survey radius may voluntarily waive the right to a survey.

(3) The owner or operator is not required to conduct a preblast survey if the owner or operator agrees to design all blasts so that the weight of explosives per eight millisecond or greater delay does not exceed that determined by the equation  $W=(D/D_s)^2$ , where W is the maximum allowable weight of explosives per delay of 8 milliseconds or greater, D is the shortest distance between any area to be blasted and any inhabitable structure not owned or controlled by the developer and  $D_s$  equals  $70 \text{ ft.}/(\text{lb.})^{1/2}$ .

G. Blasting may not occur in the period between sundown and sunrise the following day or in the period 7:00 p.m. and 7:00 a.m., whichever is greater. Routine production blasting is not allowed in the daytime on Sunday. Detonation of misfires may occur outside of these times but must be reported to the department within 5 business days of the misfire detonation. Blasting may not occur more frequently than 4 times per day. Underground production blasting may be exempted from these requirements provided that a waiver is granted by the department.

H. Sound from blasting may not exceed the following limits at any protected location:

Number of Blast Per Day	Sound Level Limit
1	129 dbl
2	126 dbl
3	124 dbl
4	123 dbl

I. The maximum peak particle velocity at inhabitable structures not owned or controlled by the developer may not exceed the levels established in Table 1 in paragraph K and the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1. The department may grant a variance to allow ground vibration levels greater than 2 inches per second on undeveloped property not owned or controlled by the applicant if the department determines that no protected natural resource, unusual natural area or historic site will be adversely affected by the increased ground vibration levels. If inhabitable structures are constructed on the property after approval of the development and prior to completion of blasting, the developer immediately must notify the department and modify blasting procedures to remain in compliance with the standards of this subsection.

J. Based upon an approved engineering study, the department may grant a variance to allow higher vibration levels for certain buildings and infrastructures. In reviewing a variance application, the department shall take into account that the standards in this paragraph and paragraph I are designed to protect conventional low-rise structures such as churches, homes and schools. In cases of practical difficulty, the department may grant a variance from paragraph I if it can be demonstrated that no adverse impacts on existing infrastructures or protected natural resources, unusual natural areas or historic sites will result.

K. Table 1 of this paragraph or the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1 must be used to evaluate ground vibration effects for those blasts for which a preblast survey is required.

(1) Either Table 1 of this paragraph or graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1 may be used to evaluate ground vibration effects when blasting is to be monitored by seismic instrumentation.

(2) Blasting measured in accordance with Table 1 of this paragraph must be conducted so that the peak particle velocity of any one of the 3 mutually perpendicular components of motion does not exceed the ground vibration limits at the distances specified in Table 1 of this paragraph.

(3) Seismic instruments that monitor blasting in accordance with Table 1 of this paragraph must have the instrument's transducer firmly coupled to the ground.

(4) An owner or operator using Table 1 of this paragraph must use the scaled-distance equation,  $W=(D/D_s)^2$ , to determine the allowable charge weight of explosives to be detonated in any 8 millisecond or greater delay period without seismic monitoring, where W is equal to the maximum weight of explosives, in pounds, and D and  $D_s$  are defined as in Table 1 of this paragraph. The department may authorize use of a modified scaled-distance factor for production blasting if the owner or operator can demonstrate to a 95% confidence level, based upon records of seismographic monitoring at the specific site of the mining activity covered by the permit, that use of the modified scaled-distance factor will not cause the ground vibration to exceed the maximum allowable peak particle velocities of Table 1 of this paragraph.

(5) Blasting monitored in accordance with the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1 must be conducted so that the continuously variable particle velocity criteria are not exceeded.

The owner or operator may apply for a variance of the ground vibration monitoring requirement prior to conducting blasting at the development site if the owner or operator agrees to design all blasts so that the weight of explosives per 8 millisecond or greater delay does not exceed that determined by the equation  $W=(D/D_s)^2$ , where W is the maximum allowable weight of explosives per delay of 8 milliseconds or greater, D is the shortest distance between any area to be blasted and any inhabitable structure not owned or controlled by the developer and  $D_s$  equals 70 ft./lb.<sup>1/2</sup>. As a condition of the variance, the department may require submission of records certified as accurate by the blaster and may require the owner or operator to document compliance with the conditions of this paragraph.

The following is Table 1.

Distance versus Peak Particle Velocity Method

Distance (D) from the blast area (feet)	Maximum allowable peak particle velocity (Vmax) for ground vibration (in./sec.)	Scaled-distance factor (Ds) to be applied without seismic monitoring
0 to 300	1.25	50
301-5000	1.00	55
Greater than 5000	0.75	65

L. A record of each blast, including seismographic data, must be kept for at least one year from the date of the last blast, must be available for inspection at the development or at the offices of the owner or operator if the development has been closed, completed or abandoned before the one-year limit has passed and must contain at a minimum the following data:

- (1) Name of blasting company or blasting contractor;
- (2) Location, date and time of blast;
- (3) Name, signature and social security number of blaster;
- (4) Type of material blasted;
- (5) Number and spacing of holes and depth of burden or stemming;
- (6) Diameter and depth of holes;
- (7) Type of explosives used;
- (8) Total amount of explosives used;
- (9) Maximum amount of explosives used per delay period of 8 milliseconds or greater;
- (10) Maximum number of holes per delay period of 8 milliseconds or greater;
- (11) Method of firing and type of circuit;

- (12) Direction and distance in feet to the nearest dwelling, public building, school, church or commercial or institutional building neither owned nor controlled by the developer;
- (13) Weather conditions, including such factors as wind direction and cloud cover;
- (14) Height or length of stemming;
- (15) Amount of mats or other protection used;
- (16) Type of detonators used and delay periods used;
- (17) The exact location of each seismograph and the distance of each seismograph from the blast;
- (18) Seismographic readings;
- (19) Name and signature of the person operating each seismograph; and
- (20) Names of the person and the firm analyzing the seismographic data.

M. All field seismographs must record the full analog wave form of each of the 3 mutually perpendicular components of motion in terms of particle velocity. All seismographs must be capable of sensor check and must be calibrated according to the manufacturer's recommendations.

#### **§490-AA. Inspections**

The department may periodically inspect a site, examine relevant records of the owner or operator of a quarry, take samples and perform tests necessary to determine compliance with the provisions of this article.

#### **§490-BB. Enforcement and penalties**

The department shall administer and enforce the provisions of this article.

**1. Stop-work order.** The department may order the owner or operator of a quarry that is not operating in compliance with this article to cease operations until the noncompliance is corrected.

**2. Penalty.** A person who violates a provision of this article commits a civil violation and is subject to the penalties established under section 349. Penalties assessed for enforcement actions taken by the State are payable to the State.

3. **Reclamation.** If, after an opportunity for a hearing, the commissioner determines that the owner of an excavation site or the person who was engaged in the excavation activity at the excavation site has violated this article, the commissioner shall direct the department staff or contractors under the supervision of the commissioner to enter on the property and carry out the necessary reclamation. The person engaged in mining or any affiliated person who guarantees performance at the excavation site is liable for the reasonable expenses of this necessary reclamation. The commissioner may use the bond or other security paid under section 490-Z, subsection 13, paragraph F to meet the reasonable expenses of reclamation.

#### **§490-CC. Variances**

An owner or operator must comply with the performance standards in section 490-Z unless a variance from those performance standards is approved by the department. Except when prohibited by section 490-Z, the department may grant a variance from the performance standards in this article if the owner or operator affirmatively demonstrates to the department that the variance does not adversely affect natural resources or existing uses and does not adversely affect the health, safety and general welfare of the public. A variance application must include any fee applicable under section 490-EE. The department shall process the variance application according to chapter 2 and the rules adopted by the department for processing an application. An applicant for a variance under this article shall hold a public informational meeting as described in those rules.

The department shall publish a timetable for responding to variance applications in the same manner prescribed in section 344-B. A variance is not valid unless approved by the department and, if a municipality is the regulator, the municipality. In making its decision on a variance application, the department shall consider comments or information received and the compliance record of the owner or operator. The department shall inform the owner or operator of any significant concerns or issues raised.

#### **§ 490-DD. Municipal enforcement; registration**

A municipality may register for authority to enforce this article by adopting and submitting to the commissioner an ordinance that meets or exceeds the provisions of this article. The commissioner shall review that ordinance to determine whether that ordinance meets the provisions of this article and if the municipality has adequate resources to enforce the provisions of this article. If the commissioner determines that the ordinance meets the provisions of this article and that the municipality has the resources to enforce this article, the commissioner shall register that municipality for authority to enforce this article. Immediately upon approval by the commissioner, primary enforcement authority for this article vests in that municipality. The commissioner may not approve an ordinance under this section unless the ordinance requires that any request for a variance from the standards in the article be approved by the commissioner before the variance is valid.

1. **Relation to home rule.** This section may not be construed to limit a municipality's authority under home rule to adopt ordinances regulating quarries.

2. **Optional participation.** This article may not be construed to require a municipality to adopt any ordinance.<sup>1</sup>

3. **Suspension of approval.** The commissioner may act to enforce any provision of this article or suspend the registration of a municipality if the commissioner determines that a municipal ordinance no longer conforms to the provisions of this article or that the municipality is not adequately enforcing this article. The commissioner shall notify a municipality of any such determination in writing. Suspension of municipal registration by the commissioner does not void or in any way affect a municipal ordinance or in any way limit the municipality's authority to enforce the provisions of its ordinance.

4. **Appeal.** A municipality may appeal to the board any decision of the commissioner under this section. Any decision by the board on appeal by a municipality constitutes final agency action.

#### **§ 490-EE. Transfer of ownership or operation, review before expansion; fees**

1. **Review before expansion.** Before expanding a quarry beyond an area that exceeds a total of 10 acres of reclaimed and unreclaimed land and before each additional 10-acre expansion, the owner or operator shall notify the regulator of the owner's or operator's intent to expand and must request an inspection. In the same manner as prescribed in section 344-B, the department shall publish a timetable for responding to inspection requests and shall inspect the site within that time period to determine the quarry's compliance with this article and other applicable laws administered by the department. The department may defer an inspection for a reasonable period when winter conditions at the site prevent the department from evaluating an expansion request. The department shall notify the owner or operator of a deferral under this section. Excavation activities may continue after the filing of a notice of an intent to expand. The failure of a regulator to conduct a site visit within a published time period is not a sufficient basis for a stop-work order under section 490-BB, subsection 1.

At the time of filing a notification of intent to expand, the owner or operator shall pay any fee required by this section.

2. **Transfer of ownership or operation.** A person who purchases a quarry that is operated under a notice of intent to comply, as established under section 490-Y, or who obtains operating authority of a quarry that operates under a notice of intent to comply must file within 2 weeks after the purchase or the obtaining of operating authority a notice of intent to comply on a form developed by the department. The new owner or operator may operate the quarry during this 2-week period without having filed a notice of intent to comply if the new owner or operator complies with all standards of this article.

3. **Fees.** The owner or operator a quarry shall pay the regulator:

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- A. An initial fee of \$250 upon filing a notice of intent to comply under section 490-Y;
- B. By March 1st of each year, an annual fee of:
  - (1) Three hundred fifty dollars for an excavation from which 2,500 cubic yards or more of material will be extracted during that year; and
  - (2) Fifty dollars for all other excavations. To be eligible for the annual fee under this paragraph, the owner or operator must include with the payment of this fee a signed statement certifying that less than 2,500 cubic yards of material will be extracted during that year;
- C. A fee of \$250 for each variance requested under section 490-CC, except for the following:
  - (1) A fee of \$500 for a variance to excavate below the seasonal high water table;
  - (2) A fee of \$500 for a variance to create an externally drained quarry;
  - (3) A fee of \$125, for a variance to waive the topsoil salvage requirement;
  - (4) A fee of \$125 for a variance to waive the monitoring requirements for airblasts and ground vibration; and
  - (5) A fee of \$250 upon filing a notice of intent to expand under section 490-EE; and<sup>1</sup>
- D. A fee of \$250 upon filing a notice of intent to expand under this section.

Notwithstanding any other provision of this subsection, the total for all fees paid under paragraphs A and B for one quarry in one calendar year may not exceed \$350.

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<sup>1</sup> This subparagraph will be deleted in the Revisor's Errors Bill

**MONITORING EXISTING SOUND LEVELS  
DRAGON PRODUCTS COMPANY  
OCEAN AVENUE QUARRY  
PORTLAND, MAINE**

**Prepared for: Kleinschmidt Associates  
Prepared by: Jacques Whitford  
July 23, 1997**





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July 23, 1997  
File 971016

Mr. Jon Christensen  
Kleinschmidt Associates  
75 Main Street, P.O. Box 576  
Pittsfield, Maine 04967

**Subject:     Monitoring Existing Sound Levels  
              Dragon Products Company, Ocean Avenue Quarry  
              Portland, Maine**

Dear Mr. Christensen:

Jacques Whitford is pleased to present this report on the monitoring of existing sound levels at the Dragon Products Company (Dragon) Ocean Avenue Quarry and Cement Plant in Portland, Maine. Monitoring at the quarry was conducted to assess current sound levels at the site for comparison with applicable noise regulations.

### **Project Background**

Dragon Products is considering an expansion of their quarrying operations located on Ocean Avenue in Portland, Maine (Figure 1, Site Locus). As part of the expansion, the zoning of Dragon's property may change.

Dragon Products has been operating on Ocean Avenue in a residentially-zoned area. The property's zoning may change to industrial, or possibly a unique zone of its own, as the City reassesses its zoning ordinances. City of Portland noise regulations vary from zone to zone. The City allows a maximum average sound level of 75 dBA at the property lines in industrially-zoned areas. City of Portland regulations appear to contain no noise regulations for residential zones.

A new residential development has recently been constructed in the vicinity of the Dragon quarry. Residents of the new subdivision are concerned about the noise levels that may be generated by any expansion of the quarry. Consequently, Dragon implemented a noise assessment to address the concerns of their neighbors and assess compliance of their existing operations with the City of Portland Regulations.



## Methodology

The noise assessment was conducted with two Metrosonics dB-308 Sound Analyzers. Measurements were recorded for  $L_{eq}$  (equivalent steady state sound level) at one minute intervals during the testing. Measurements were also obtained for  $L_{max}$  (maximum sound level), and  $L_{10}$  (sound level exceeded 10 percent of the time).

Baseline measurements were obtained on Saturday, June 14, 1997 when the Dragon facility was not in operation. These measurements were collected to assess other sources of noise in the vicinity of the site. These measurements were collected at locations B1 and B2 as shown on the attached site map (Figure 2).

Noise data was collected during plant operations on June 16 and 17, 1997. Measurements were taken over two hour time periods at each location. All of the noise data was collected during the morning hours of operation, which Dragon reported to be the busiest times at the facility.

Noise measurements were collected at four locations on Ocean Avenue: directly across from the entrance to the site (N1); at the property line of the nearest southern neighbor (N2); at the property line of the nearest northeastern neighbor (N3); and at the property line of Summer Place, a newly constructed subdivision south of the site (N4). Measurements were also obtained around the perimeter of the quarry site, including the entrance to the facility (N5, N6, N7, N8). Approximate locations of each monitoring station are included in Figure 2.

## Results

The results of the monitoring are presented in Table 1, attached. The table indicates the test location, date/time, and presents the first hour equivalent steady state sound level data, the second hour equivalent steady state sound level data, and the two hour equivalent steady state sound level data. Test locations B1 and B2 were baseline measurements and were collected over a four hour period.

Baseline measurements collected while the plant was not in operation ranged from 62.6 to 66.0 dB. The high reading was obtained from the baseline location (B1) directly across Ocean Avenue from the plant entrance.

Hourly noise measurements collected on June 16 and 17, 1997, ranged from 51.0 to 77.9 dB. The highest reading was collected at station N1, across Ocean Avenue from the facility entrance. Measurements collected around the perimeter of the quarry were all below 60 dB.



### Discussion

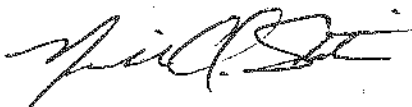
The measurements collected at the Dragon property lines and one location across Ocean Avenue indicate that the City of Portland industrial-zone standard of 75 dB was exceeded two times during the testing. The first hour of monitoring at location N5 at the Ocean Avenue property line resulted in a 76.1 dB equivalent steady state sound level. The first hour of monitoring at location N1 (across Ocean Avenue from the facility) was higher at 77.9 dB equivalent steady state sound level, indicating that traffic is a significant source of noise in the site vicinity.

The noise levels observed correspond to a period of relatively normal plant operation. However, our data must be qualified by the fact that changes in the operations at the plant (*e.g.*, changes in truck traffic volume), or variation in ambient neighborhood noise, may result in noise levels that are different from those reported herein. Furthermore, sound levels may vary based on ambient climatology (*e.g.*, temperature, humidity, wind).

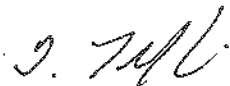
### Closure

If you have any questions or require any additional information regarding this project, please call. We have enjoyed working with Kleinschmidt Associates and Dragon Products.

Sincerely,  
**JACQUES WHITFORD**



Nicholas O. Sabatine  
Project Manager



D. Todd Coffin  
Environmental Scientist

### Attachments:

- Table 1 - Noise Monitoring Results
- Figure 1 - Site Locus
- Figure 2 - Site Plan
- Appendix A - Time Histograms



Mag 15.00  
Thu Jun 26 10:31 1997  
Scale 1:15,625 (at center)

1000 Feet

500 Meters

- Secondary SR/Road/Hwy Ramp
- State Route
- Interstate/Limited Access
- US Highway
- + + Railroad
- Point of Interest

DRAGON PRODUCTS QUARRY & CEMENT PLANT

Graves Hill

ALCOA WOODS  
WELLSTONE

### SITE LOCUS

Dragon Products Company  
Ocean Avenue, Portland, Maine

Jacques Whitford  
Freeport, Maine

Figure 1

June 26, 1997

**TABLE 1**  
**Noise Monitoring Results**  
**Dragon Products Company**  
**Ocean Ave., Portland, Maine**

Regulation	Permissible Noise Levels			
City of Portland (Residential Zoning)	No Noise Regulations			
City of Portland (Industrial Zoning)	75.0 dB (measured at the property line)			
Test Location	Date/Time	Hour 1 Sound Level (L <sub>eq</sub> )	Hour 2 Sound Level (L <sub>eq</sub> )	Two Hour Sound Level (L <sub>eq</sub> )
B1 - Across from Plant Entrance	6/14/97 0830-1229	NA	NA	66.0 dB*
B2 - Southern Neighbor Property Line	6/14/97 0830-1229	NA	NA	62.6 dB*
N1 - Across from Plant Entrance	6/16/97 0650-0849	77.9 dB	74.0 dB	76.4 dB
N2 - Southern Neighbor Property Line	6/16/97 0650-0849	65.2 dB	64.5 dB	65.0 dB
N3 - Devito Property Line	6/16/97 0920-1119	65.6 dB	66.2 dB	65.9 dB
N4 - Summer Place Property Line	6/16/97 0920-1119	63.4 dB	63.6 dB	63.6 dB
N5 - Ocean Ave. Property Line	6/17/97 0700-0859	76.1 dB	71.9 dB	74.5 dB
N6 - Quarry Southern Perimeter	6/17/97 0700-0859	53.3 dB	51.0 dB	52.3 dB
N7 - Quarry Northern Perimeter	6/17/97 0940-1139	59.7 dB	59.7 dB	59.7 dB
N8 - Quarry SW Perimeter	6/17/97 0940-1139	55.8 dB	54.8 dB	55.3 dB

\* - Baseline measurements were collected over a four hour time period.

Attachment 10

Novotny and Monn

29 Summer Place

Portland, Maine 04103

February 14, 1998

Mr. John Carroll, Chairman  
Planning Board of the City of Portland  
4<sup>th</sup> Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

Dear Mr. Carroll:

We are writing in response to Dragon Cement's Application for Zoning Amendment.

We are new residents of Summer Place, a neighborhood community of 19 homes (20 home sites) situated diagonally across the street from Dragon Cement. Previously we were home owners and tax payers in the town of Freeport. We made a decision to relocate and make a home purchase in Portland, in spite of the fact that property taxes were considerably higher than in Freeport. Prior to purchasing our property we were aware that Summer place was rezoned in 1995 and the adjacent industrial use of the Dragon site. We were informed of this grandfathered non-conforming use, and did not object to it when we made our residential purchase. We do, however very strongly object to their request to commence mining (blasting) operations on R-3 zoned property. This property, to the best of our knowledge, has never been used as part of the manufacturing or mining operations of Dragon Cement and its predecessor. According to Dragon's own Plan Manager, Dave Grinnell, "Dragon knew there was some question as to this property's use" when they acquired the site in 1991. It appears that there may even be some question as to whether Dragon would be permitted to resume mining operations at its present quarry.

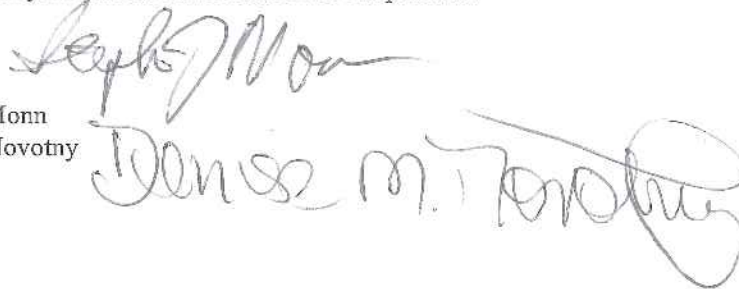
As a point of clarification, the Application states in Paragraph 3 that "Dragon's only goal in this application is to clarify that it may mine stone from its site to use in its concrete manufacturing process," but the application seeks much more than that with respect to noise levels and the like. In fact, by its own admission the company is currently in violation of zoning standards for noise levels (76 decibels versus the highest allowable standard of 75 decibels for IH). Another misrepresentation in the application is the assertion in Paragraph 2 that the only opposition that "surfaced during that process was opposition from Summer Place residents." In fact, other abutting neighbors opposed this application too, as the record will clearly show.

In summary, we understand Dragon's right to continue their manufacturing operation on the present site as a legitimately grandfathered, non-conforming use - we made a decision to purchase our home and relocate in spite of their operation. **We do not believe that gives them the right to rezone the adjacent property from R-3 to Contract Zoning, which would permit blasting and all that entails in terms of safety, noise, vibrations, dust, etc. We strongly oppose this proposition.**

Thank you for your sincere consideration of our position.

Sincerely,

Stephen J. Monn  
Denise M. Novotny





John and Lenora Gutwin

Sunday, February 22, 1998

John Carroll, Chair  
Planning Board of the City of Portland  
389 Congress Street  
Portland, ME 04101

RE: Dragon Cement application for Zoning Amendment.

Dear Mr. Carroll;

We are opposed to the proposal to rezone the R-3 property across the street from us. The activities planned for the proposed contract zone would most likely increase noise, dust and vibrations beyond acceptable limits. Even if Dragon Cement claims they will not, it is still likely that they will through negligence or accident. This expectation of noise, dust, and vibrations beyond acceptable limits is what is sure to diminish our property value in the adjacent residential zone.

Of course we agree that continuing a legal non-conforming use is fair. Expanding a non-conforming use is unfair and is counter one of the greatest benefits of zoning; planned, predictable development.

Sincerely,



John D. Gutwin



Lenora B. Gutwin

Feb: 21, 1978  
474 Presumpscot St.  
Portland, ME 04103

John Carroll, Chair  
Planning Board of the City of Portland  
4th Floor Planning Office  
339 Congress St.  
Portland, ME 04101

Dear Mr. Carroll:

This letter is in regard to the request of Dragon Products Co. to have the property they own on Ocean Ave. rezoned from R3 to a contract zone to be known as Dragon Industrial Zone.

Although this letter is too late for the workshop discussion I would like it to be a part of the package for your deliberation at the public hearing that is sure to be scheduled in the future.

Dragon Products Co's Ocean Ave. business is a non-conforming use in a R3 zone. Being a heavy industry type of operation are they obliged to adhere to the cities IH zone requirements. If so have they been in compliance with them? Who has been monitoring the situation for the city? What have been the conclusions of the monitoring reports, if any? These are important questions to be answered if you grant their request for a change of zone because they will then come under the requirements of the MDEP plus the cities IH, and the rules will be more stringent.

The few trucks that haul in material for the manufacture of concrete are certainly far less of an annoyance to the neighborhood than the drilling, blasting and crushing of rock will ever be. We are well aware of the noise, vibration and dust created by this process.

It is easy to promise that there will not be a problem with this process due to the new innovations of equipment and methods used in performing these three functions plus the strict regulations of the MDEP. Without diligent and strict monitoring of the whole operation promises are easily forgotten and left far behind.

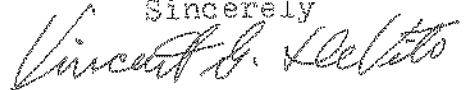
Regarding the measurement of noise, Portland's IH guidelines call for the meter to be located 4' above the ground. The one time I saw the companies sound engineers take a reading they had the meter on the ground. Would the ground muffle the sound so they got a false, low, measurement? Did they take all their readings in this manner? Probably. So were all their readings lower than the actual noise level? Probably.

There is also the problem of the frontend loader working, occasionally at 5:00 to 5:30 in the morning loading the conveyer belt system that carries material up into the building. Portland's noise level for this early hour is 50dB. I am sure this machine makes much more noise than that.

The idea of Dragon Co. wanting to expand operations into the area that was never a part of the original non-conforming use area is unacceptable to the neighborhood.

We strongly object to this zone change request.

Sincerely



Vincent G. DeVito

# **Chris and Cathy Brigham**

**31 Summer Place, Portland, ME 04103  
207-879-5400, FAX: 207-874-9896**

John Carroll, Chair  
Planning Board of the City of Portland  
4<sup>th</sup> Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

RE: Request by Dragon Products for Rezoning

Dear Mr. Carroll:

This letter is in regards to the request by Dragon Products Company to rezone property designated R-3 as a contract zone. Their request is not in the best interests of the City of Portland or the surrounding community. Dragon Products Company was knowledgeable of the zoning issues when they purchased the property. It is unfair to the surrounding community for them to want to change the situation because it would be more economical for them to blast gravel then transport gravel in.

We live off of Ocean Avenue in the vicinity of Dragon Products. Therefore, we are both residents and tax payers. In addition, I (Chris) serve as President of the Summer Place Homeowners Association. When we moved to the area we recognized that Dragon Products Company was our neighbor and accepted this as reality. We understood that they were permitted to utilize certain property zoned as R-3 for a non-conforming use. We also understood that they had not blasted for several years and there were no intentions to blast in the future. The mining portion of their business was inactive, and the original property had been quarried. We also recognized that only a portion of the R-3 property which Dragon Products had purchased from Cook was permitted to be used for non-conforming purposes.

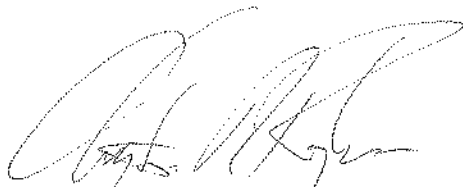
Our "eyes were open" when we moved to the area. However, we have been concerned by other issues, including: extended hours of operation, noise levels (which at their property boundaries is in excess of the levels established for medium intensity Industrial Zone), the frequent travel of concrete trucks down Ocean Avenue (resulting in both noise and road damage), and the frequent blockage of Ocean Avenue (Route 9) by large transport trucks (at the turn in the road near their entrance). We certainly are not asking them to leave, although we do have these concerns.

A major concern at that this time is their desire to change the situation. Although they articulate a position that this would ultimately benefit the surrounding community, we strongly disagree. In reviewing their application, we note major concerns:

- Their request would expand the use of the “non-conforming” property, even though it would be redefined as a “contract zone.” This is inconsistent with an intent to reduce the extent of “non-conforming” property.
- It is inconsistent with the best interests of the City of Portland and the surrounding community. It also appears to be inconsistent with your long term planning for business development within the City and the potential for recreational use of the land which previously served as the City of Portland landfill.
- It would appear that the operation would need to expand beyond its current scope in all phases for it to be economically viable.
- Processing of blasted rock into usable sized gravel alone would greatly increase noise and dust from the operation.
- As outlined above there are concerns about their existing operation.

We hope that the Dragon Products Company realizes the realities of its current situation as we recognize the realities of ours. We accept them as a neighbor, however as with all neighbors want them to be a “good neighbor.” We do not them to “change the rules,” which we had all accepted, merely because it would be to their financial advantage to do so. Their requested changes would not benefit the surrounding community nor the City of Portland. We would welcome the opportunity to meet with the Planning Board and to express our concerns.

Sincerely,



Christopher R. Brigham



Cathy V. Brigham

cc: Sara Hopkins, City Planner  
John Bannon

Mike and Sue Yandell  
51 Summer Place  
Portland, Maine 04103  
Tel. 207-761-4678

January 20, 1998

Mr. John Carroll, Chairman  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

Dear Mr. Carroll:

We are writing in response to Dragon Cement's Application for Zoning Amendment.

We reside in Summer Place, a neighborhood community of 19 homes (20 home sites) situated diagonally across the street from Dragon Cement. As noted in the application, Summer Place was rezoned in 1995 and "at the time, everyone was fully aware of the adjacent industrial use on the Dragon site." Yes, we were aware of this grandfathered non-conforming use, we did not find it objectionable then and we do not object to it at present. We do, however, strongly object to their request to commence mining (blasting) operations on R-3 zoned property acquired in the 1980's, which is not part of the property grandfathered as a non-conforming use. This property, to the best of my knowledge, has never been used as part of the manufacturing or mining operations of Dragon Cement or its predecessor. According to Dragon's own Plant Manager, Dave Grinnell, "Dragon knew there was some question as to this property's use" when they acquired the site in 1991. At least this is what he said at a meeting with abutters in December 1997. (There may even be some question as to whether Dragon would be permitted to resume mining operations at its present quarry, but then we are not lawyers.)

As a point of clarification, the Application states in Paragraph 3 that "Dragon's only goal in this application is to clarify that it may mine stone from its site to use in its concrete manufacturing process," but the application seeks much more than that with respect to noise levels and the like. In fact, by its own admission the company is currently in violation of zoning standards for noise levels (76 decibels versus the highest allowable standard of 75 decibels for IH). Another misrepresentation in the application is the assertion in Paragraph 2 that the only opposition that "surfaced during that process was opposition from . . . Summer Place residents." In fact, other abutting neighbors opposed this application too, as the record will clearly show.

In summary, we understand and respect Dragon's right to continue their manufacturing operation on the present site as a legitimately grandfathered, non-conforming use. We do not believe that gives them the right to rezone the adjacent property from R-3 to Contract Zoning, which would permit blasting and all that entails in terms of safety, noise, vibrations, dust, etc.

Thank you for your earnest consideration of our position.

Sincerely,

*Andrew Handell*

*Mike Yandell*

Sunday  
8th February, 1998

4110 Presumpscot Street

Portland

ME 04103

Dear Mr. Gray!

Re: Dragon Cement

As it appears the Public may not be allowed to voice their comments at the meeting, I should like to make mine known on paper.

The DeNittos + I have worked long + hard to retain this area as a R-3 Zone + we are very concerned that Dragon Cement should rear their head again to try change things.

It is not stated exactly what they have in mind, however, I would vehemently oppose any change that might create a health hazard or even jeopardize <sup>part of</sup> my home in future, if necessary.

So I would say to the Planning Board, please give some thought to the long term residents + the owners of the beautiful new homes on Ocean Avenue + not to the mighty Dragon.

Sincerely  
Margaret Brown (Mrs.)



# MAINE MEDICAL CENTER

## RADIATION ONCOLOGY DIVISIONS:

*Southern Maine  
Radiation Therapy Institute*

22 Bramhall Street  
Portland, Maine 04102-3175  
(207) 871-2276  
FAX (207) 871-6069

*MMC - Scarborough Campus  
Radiation Therapy*

Unit 101  
100 U.S. Route 1  
Scarborough, Maine 04074-9308  
(207) 885-7500  
FAX (207) 885-7525

*Coastal Cancer  
Treatment Center*

205 Congress Avenue  
Bath, Maine 04530-1531  
(207) 443-5866  
FAX (207) 871-6770

February 5, 1998

John Carroll, Chair  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress Street  
Portland, Maine 04101

Dear Mr. Carroll,

I am writing this letter in response to the Dragon Cement Company's request to change the current status of the R3 zone that the company owns.

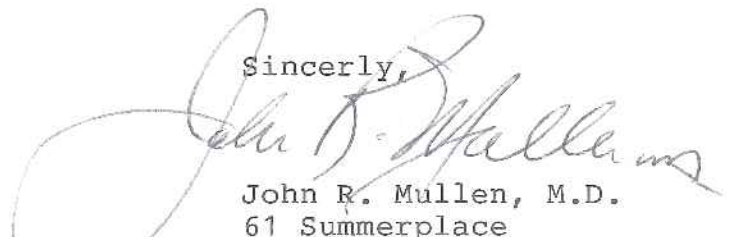
I reside in Summerplace, which is a pleasant neighborhood of 19 families. It is directly across from the area that Dragon now wants to blast in. Although all of us knew prior to purchasing our homes that Dragon Concrete had a grandfathered non-conforming use for their current mining site, we were not prepared to accept further extension of that non-conforming zone to land obtained by Dragon in the 1980's. I strongly object to any change in the current status of the land in question.

Noise levels and dust levels will increase, not decrease as a spokesman from Dragon claims. The company is already in violation of current noise levels by their own admission. Furthermore to make their operation economically feasible, Dragon would have to expand all aspects of their operation. This would further increase dust and noise levels.

I hope that the Planning Board in their review of the proposed change can see the difficulties and ambiguities in the plan proposed by Dragon. If the change is approved it will only make the community worse more than better.

Thank you in advance for your consideration of our position.

Sincerely,



John R. Mullen, M.D.  
61 Summerplace

22 Bramhall Street, Portland, Maine 04102-3175

A member of the MaineHealth family

A Teaching Hospital of the University of Vermont College of Medicine

Elizabeth Foley  
Klaus-Peter Voss  
73 Summer Place  
Portland, ME 04103  
February 3, 1998

John Carroll, Chair  
Planning Board of the City of Portland  
4th Floor Planning Office  
389 Congress Street  
Portland, ME 04101

Re: Dragon Products Company's Request for Re-zoning

Dear Mr. Carroll:

We are writing this letter with reference to the plan of the Dragon Products Company to re-zone property that is presently defined as R-3 and are taking this route to express our concerns and adamant opposition. As immediate neighbors of the quarry we will be directly effected by the proposed changes in - as we believe - negative ways. To expect us to simply live with the environmental impact that the planned blasting operation will have on our property in terms of noise development and air quality for example is unreasonable. In addition to that there are still a lot of unanswered questions - despite Dragon's positive PR efforts and willingness to listen to us - in regards to the longterm seismic impact of the blasting operation on the foundation of our house.

When we bought the property and then moved into our house about a year and a half ago, we were fully aware of the presence and close vicinity of the Dragon quarry and accepted that as fact and reality. It was our understanding, however, that the Dragon Products Company had not blasted for a number of years and that it did not have the intention to do so in the future. The mining parcel of the business appeared to be inactive and the original property had been quarried.

We urge you to take our concerns into consideration and deny the Dragon Products Company's request for re-zoning.

Sincerely,

*Elizabeth Foley*  
*Klaus-Peter Voss*

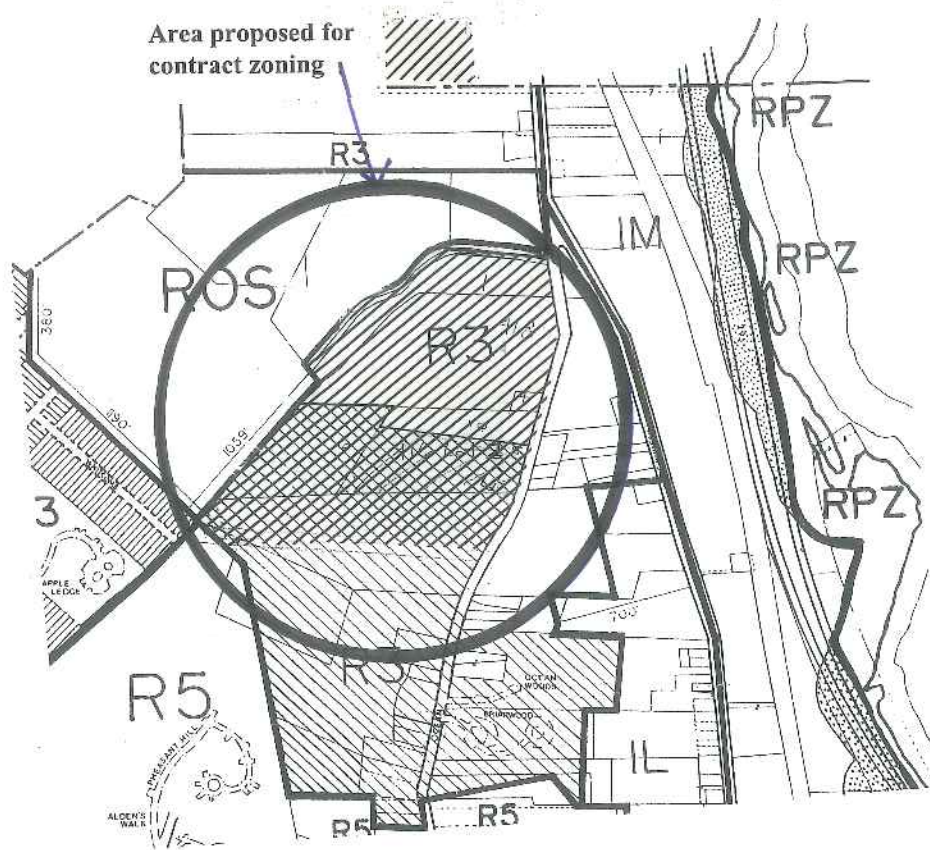
cc: Sara Hopkins, City Planner

LEGAL NOTICE

LEGAL NOTICE

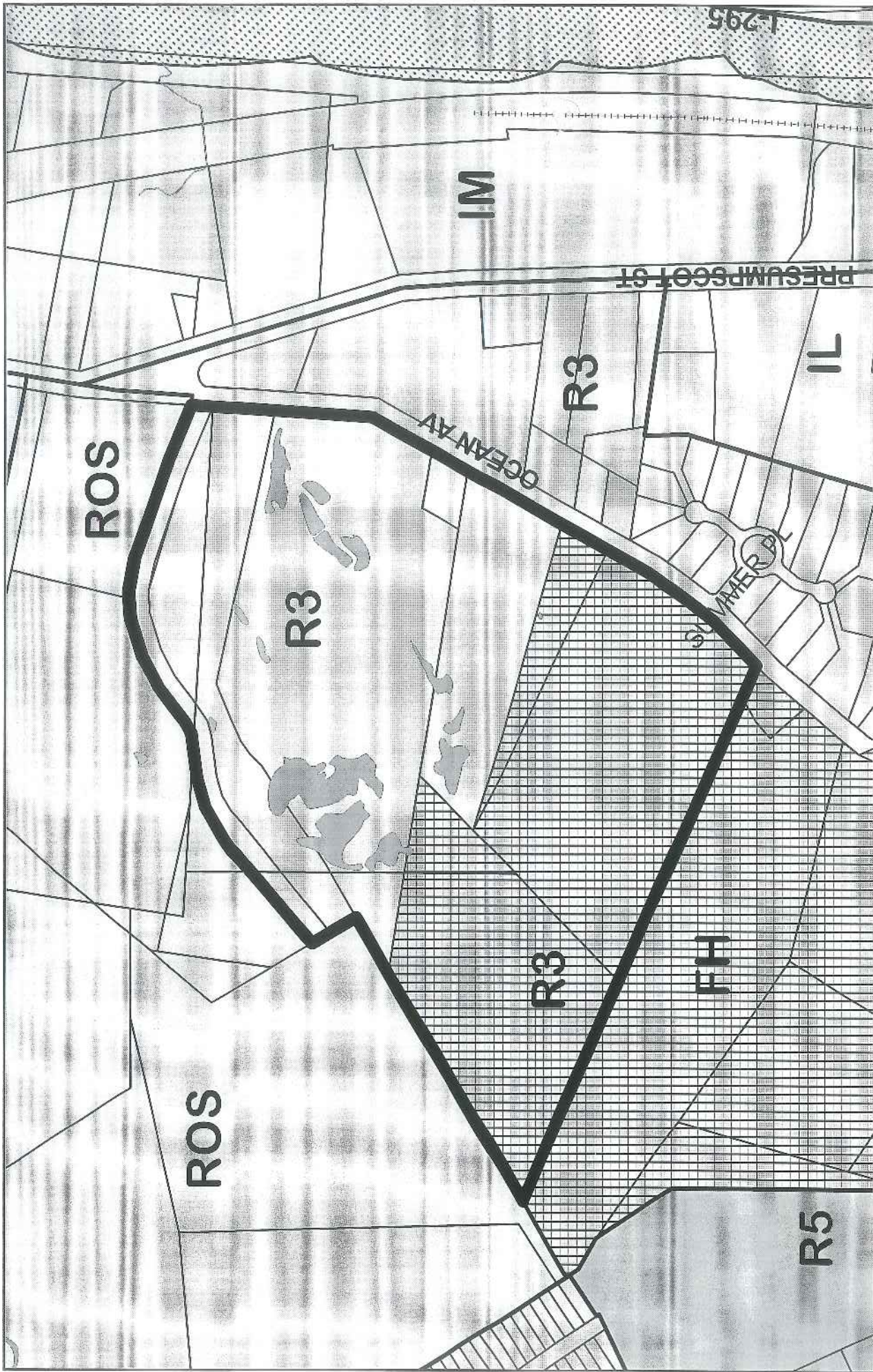
**PORTLAND PLANNING BOARD  
PUBLIC NOTICE**

Notice is hereby given that the Portland Planning Board will hold a public hearing on Tuesday evening, October 23, 2001 at 6:00 p.m. in room 209, 2<sup>nd</sup> Floor, City Hall, Portland, Maine to consider a proposal by Dragon Products for a contract zone for property located at 960 Ocean Avenue. The applicant proposes a contract zone in order to allow the blasting, crushing, and processing of rock in the production of concrete. The boundaries of the contract zone are shown below. The parcel is approximately 38 acres and zoned R-3 Residential.



Further information on this development, including the contract language, can be obtained at the Planning Department Office, City Hall, 4th Floor, or by calling 874-8720.

Jaimey Caron, Chair  
Portland Planning Board



# PROPOSED DRAGON CONTRACT ZONE

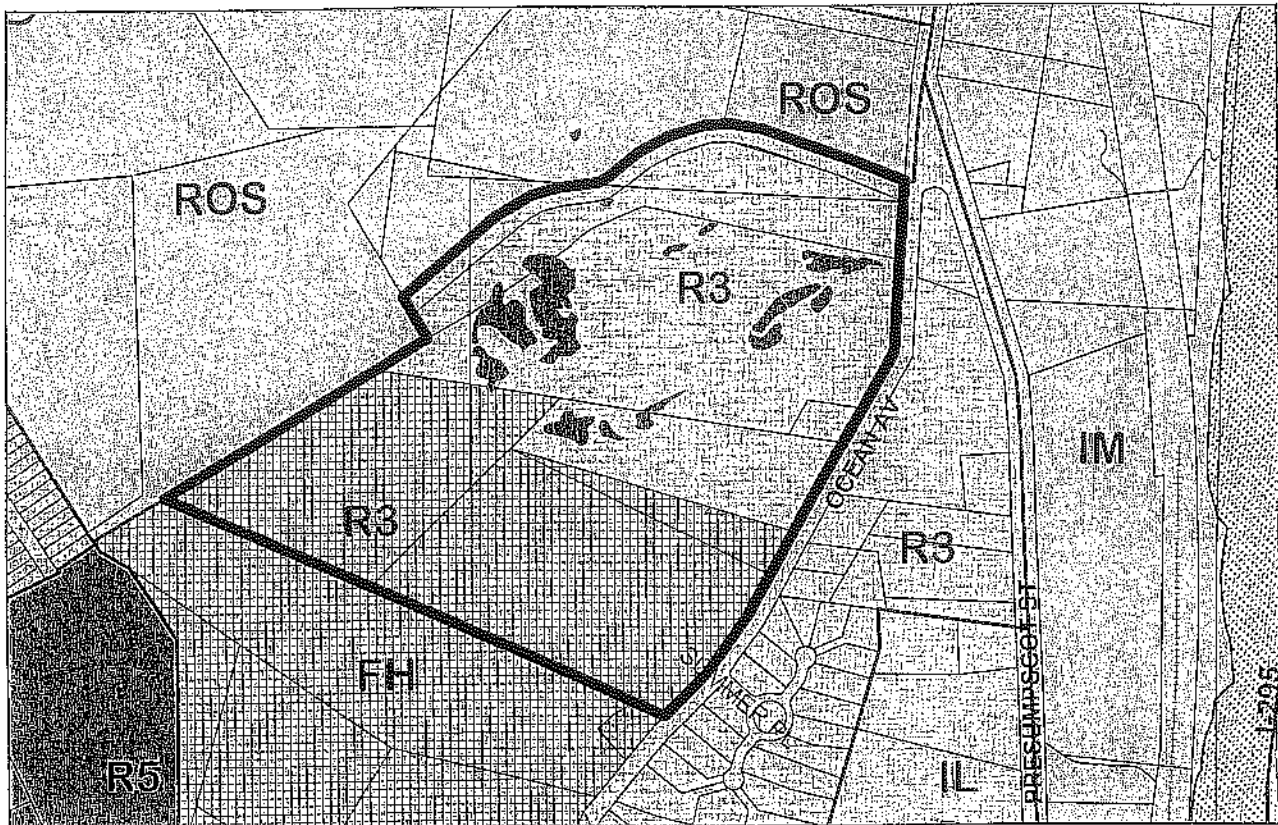
 Proposed Contract Zone

LEGAL NOTICE

LEGAL NOTICE

PORTLAND PLANNING BOARD  
PUBLIC NOTICE

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PROPOSED DRAGON CONTRACT ZONE

 Proposed Contract Zone

200 0 200 Feet



Map produced by the City of Portland's Department of Planning & Urban Development & the GIS Workgroup October 2001

Further information on this development, including the contract language, can be obtained at the Planning Department Office, City Hall, 4th Floor, or by calling 874-8720.

Jaimey Caron, Chair  
Portland Planning Board

draft: 9-28-01

**DRAGON PRODUCTS COMPANY, INC. AGREEMENT**

This document is an Agreement made by **DRAGON PRODUCTS COMPANY, INC.**, a corporation with a business address of 38 Preble Street, P.O. Box 1521, Portland, Maine 04104 ("DRAGON").

WHEREAS, DRAGON requested a rezoning of its property located at Ocean Avenue, in the **CITY of PORTLAND**, a Maine municipality located in Cumberland County and State of Maine ("CITY" or "Portland") in order to permit mining operations on the site of its legally existing nonconforming concrete plant; and

WHEREAS, DRAGON'S property is shown on Portland Assessor's Parcels: Map 416-A, Block A, Lot 2; Map 417, Block A, Lots 4, 5, 10 and 11; and Map 418, Block A, Lots 1, 3, 4, 5, 6, 9 and 10 ("Property"); and

WHEREAS, the Portland Planning Board, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberations, recommended the rezoning of the Property, subject, however, to certain conditions; and

WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY'S comprehensive plan and would not unreasonably interfere with the existing and permitted uses within the underlying R-3 zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the following plans and documents are attached to this Agreement and incorporated into this Agreement by reference:

- Attachment 1: City Zoning Map change ~~(to be prepared by City)~~
- Attachment 2: Quarry Plan View (F-1) dated June 5, 2000
- Attachment 3: Plan View of Proposed Berm (F-2) dated June 5, 2000
- Attachment 4: Ocean Avenue Longitudinal and Cross Sections (F-3) dated June 5, 2000
- Attachment 5: Vibration Standards
- Attachment 6: Blasting Plan
- Attachment 7: Pre-Blast Survey
- Attachment 8: Test Blast Program
- Attachment 9: Blast Event Protocol
- Attachment 10. Blast Monitoring
- Attachment 11. City Landfill Monitoring
- Attachment 12. Groundwater Monitoring
- Attachment 13. Quarry Reclamation
- Attachment 14. Protocol for Complaints, Damage Claims, and Restitution
- Attachment 15. Annual Quarry Report to City

NOW, THEREFORE, in consideration of the zone change made by the CITY, DRAGON hereby agrees as follows:

1. Site Development: The Property shall be developed substantially in accordance with the site plans and elevations shown on Attachments 2-4. DRAGON shall:
  - a. Remove the existing batch plant and silos, truck fuel depot, conveyor, concrete retaining wall and temporary ditch, and rock crushing facility.
  - b. Relocate its batch plant and related operations no closer than 350 feet to Ocean Avenue, in the "approximate limit of operation area" shown on Attachment 2.
  - c. Locate the new rock crusher facility no closer than 750 feet to Ocean Avenue ~~in the operations area~~ as shown on Attachment 2, and enclose any rock crushing operations within a sound insulated building.
  - d. A new earthen berm, fence, paved entrance, drainage ditch, and climbing lane will be constructed along the west side of Ocean Avenue ~~as shown on Attachments 2-4~~. All Site Plan elements, including but not limited to the final berm design, landscape planting, and scheduling, etc. will be determined by the Planning Board in its site plan review, ~~after consultation with the City Arborist.~~
  - e. DRAGON shall relocate the entrance driveway to the concrete plant, and shall create a slip lane for slow-moving traffic along Ocean Avenue as shown on Attachments 2 and 3. To the extent that any of the new roadway or drainage improvements are located on land of DRAGON, it will deed that portion of its land to the CITY.

f. Develop a stormwater management plan for the entire site, according to MeDEP performance standards, including all improvements along Ocean Avenue and within the operations area according to MeDEP performance standards.

Notwithstanding the foregoing paragraphs a through f, Provided, however, that all such development on the Property shall be subject to full Site Plan review and approval by the Planning Board, which may approve modifications to these plans as part of the review process. In addition, all development must meet all federal and state review requirements. DRAGON shall post with the CITY a performance guarantee in the full amount of improvements to be made to the site, including but not limited to the development of the operations area.

2. Authorized Uses: DRAGON shall only be authorized to establish and maintain the following uses or any combination of the uses on the Property, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth in this Agreement and established by State and Federal law:

a. Mining of stone (through various methods, including blasting) in the "quarry expansion area" shown on Attachment 2, including blasting, and crushing of stone for use in the on-site manufacture of concrete on the site only. No crushed stone shall be provided or sold for off-site concrete manufacturing.

b. Concrete manufacture and processing.

c. Outdoor storage of materials, including aggregate (rock, sand, etc) piles utilized in the concrete manufacturing, material manufactured on the site (including concrete blocks produced as an incidental part of its operations), and related machinery and equipment.

e. All concrete trucks shall be hosed down before exiting the operations area on the Property to reduce the amount of dust and debris tracked onto Ocean Avenue.

f. Vehicle repair and storage and office operations within the existing Dragon Products Company garage facilities (3 bays) on Ocean Avenue shown on Attachment 2.

3. Timing of Uses on Property: Prior to the commencement of any blasting (including test blasts), mining or rock crushing, Dragon shall obtain from the City a Certificate of Occupancy, verifying that all site alterations described in Section 1 are completed and as otherwise approved by the Planning Board within the time frame in paragraph 4. In other words, no blasting, mining or rock crushing shall occur for, at minimum, a two year period or completion of all phased site work, whichever occurs earlier have been completed. DRAGON shall discontinue use of its existing batch plant within 30 days of its new batch plant being fully operational, and shall remove its existing batch plant from the Property within 180 days of its use being discontinued.



4. Time Limit for Certain Improvements: Dragon shall apply for Site Plan Approval for the site changes described in Section 1 (a, b, d-f) (all site improvements except the rock crusher) within one year of the rezoning of the Property by the City Council. Dragon shall complete the improvements along Ocean Avenue within one year of final Planning Board approval of the site plan, and shall complete all approved site improvements within two years of final Planning Board approval of the site plan, or this contract shall automatically terminate and the Property shall automatically revert to the R-3 or any successor zone classification.

5. Natural Buffer Areas: The existing trees and other natural vegetation in the "existing wooded buffer strip" on the south side of the site and the "existing vegetation" on the north side of the site shown on Attachment 2 shall remain in their natural state. These areas, or any portions of them, may not be separately conveyed apart from the Property as a whole, while any blasting, mining, or concrete manufacturing activities are being conducted on the Property.

6. Limits on Blasting: DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. In no event shall more than four (4) individual blasts per month be permitted. All blasting and rock crushing on the site shall occur on Monday through Friday between the hours of 9:00 a.m. and 4:00 p.m. and between April 1<sup>st</sup> and November 15<sup>th</sup> of each year. No blasting or warning signals for blasting shall be done between 7:00 a.m. and 9:00 a.m. or between 2:00 p.m. and 4:00 p.m. on any day when the City of Portland public schools are in session.

**Vibration standards shall meet the limits described in Attachment 5, Maximum Allowable Peak Particle Velocity for Ground Vibration.**

7. Blasting Operations: All blasting shall also be conducted in accordance with the Blasting Plan (Attachment 6), Pre-Blast Survey Protocol (Attachment 7), Test Blast Program (Attachment 8), Blast Event Protocol (Attachment 9) and Blast Event Monitoring (Attachment 10).

DRAGON also agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including those set forth in 38 M.R.S.A. §§490-W to 490EE as it may be amended, except that where municipal standards adopted by the CITY which are not otherwise described in this Agreement are more restrictive, then the CITY standards shall apply. The MeDEP standards shall include, but not be limited to:

- a. Blasting standards described in §490-Z(14), including airblast standards in subsection (B) and (C), preblast surveys as described in subsection (F), sound standards described in subsection (H), vibration standards described in subsections (I) - (K), and blasting records as described in subsection (L), including records of peak particle velocity and decibels for each blast.
- b. Dust standards described §490-Z (12)
- c. Reclamation standards described in §490-Z (13)

8. Adjacent City Landfill: DRAGON will monitor the adjacent City landfill as described in Attachment 11. Dragon hereby indemnifies the CITY for any damage done by

Dragon's operations to the former landfill on adjacent land of the CITY on land to the north of the Dragon site.

9. Groundwater Monitoring: DRAGON will do groundwater monitoring as described in Attachment 12.

10. Parcels east of Ocean Avenue: As long as it operates its existing concrete batch plant on Ocean Avenue, DRAGON shall maintain ownership of the parcels east of Ocean Avenue across from the Property, more particularly described as Tax Map 418-A, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

11. Reclamation of Site: Reclamation of the Property into a vegetated, useable condition shall be completed substantially in accordance with the reclamation plan described in Attachment 13 within 2 years of completion of the mining on the Property; provided, however, that such plan shall be subject to full review and approval by the Planning Board before being implemented. If the owner of the Property fails to implement proper reclamation activities, then the CITY may do the work after 30 days notice to the owner, and the reasonable costs and expenses of the work by the CITY shall be a lien on the Property enforceable in the same manner as a lien for real estate taxes.

12. City Zoning Standards: DRAGON shall meet all IL zoning standards contained in sections 14-234, 14-235, and 14-236 of the Portland City Code, except as follows:

- a. No new fence shall be required pursuant to 14-235(6) except as shown on Attachments 2-4 and as may be required by the Planning Board during final Site Plan review.
- b. Outside storage of sand and stone shall not be required to meet the standards of §14-235(10).
- c. Vibration standards in §14-236(3) shall not apply to blasting, and IM vibration standards found in §14-252(3) shall apply to all other operations.
- d. Noise standards in §14-236(1) shall not apply to blasting.
- e. The existing concrete batch plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is removed from the Property, but the new concrete production building shall comply with the IL noise standards at §14-236(1) when measured at property lines of the Property.

13. IL Zoning Standards: Except as expressly modified in this Agreement, the use and occupancy of the Property shall be governed by and comply with the IL zoning provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

14. Liability and Claims: Dragon shall be responsible for all damages determined to be caused by its mining and concrete manufacturing operations. Dragon will follow the

then the CITY may institute a judicial enforcement action for the breach of this Agreement. If it is determined in such judicial enforcement action that DRAGON has breached this Agreement, and DRAGON fails to comply with the Agreement in a timely manner after such judicial determination, then the CITY Planning Staff may recommend to the City Council that this Agreement be terminated, requiring a cessation of the blasting and mining uses permitted under the terms of this Agreement; provided that the termination of the Agreement will not require cessation of the concrete manufacturing and processing and other uses described in Section 2 excluding paragraph (c) as noted above. In addition, if the CITY prevails in any court proceeding to enforce this Agreement, DRAGON shall pay all CITY attorney fees and costs incurred in such enforcement.

21. Future Peer Review: If the CITY does not understand the material given to the CITY according to the terms of this Agreement, then it may request a further explanation or clarification from DRAGON at any time. After reviewing the additional information, if the CITY still has a reasonable need to hire engineers or other blasting professionals to help it evaluate the material, then DRAGON agrees to pay the reasonable costs of such peer review; ~~provided, however, that DRAGON must reasonably approve the scope and expected cost of such peer review work in writing before any work is done for which DRAGON is financially responsible.~~

22. Execution: This Contract shall be executed upon the Portland City Council approval of the rezoning of the Property.

WITNESS: DRAGON PRODUCTS COMPANY, INC.

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss. Date: \_\_\_\_\_, 2001

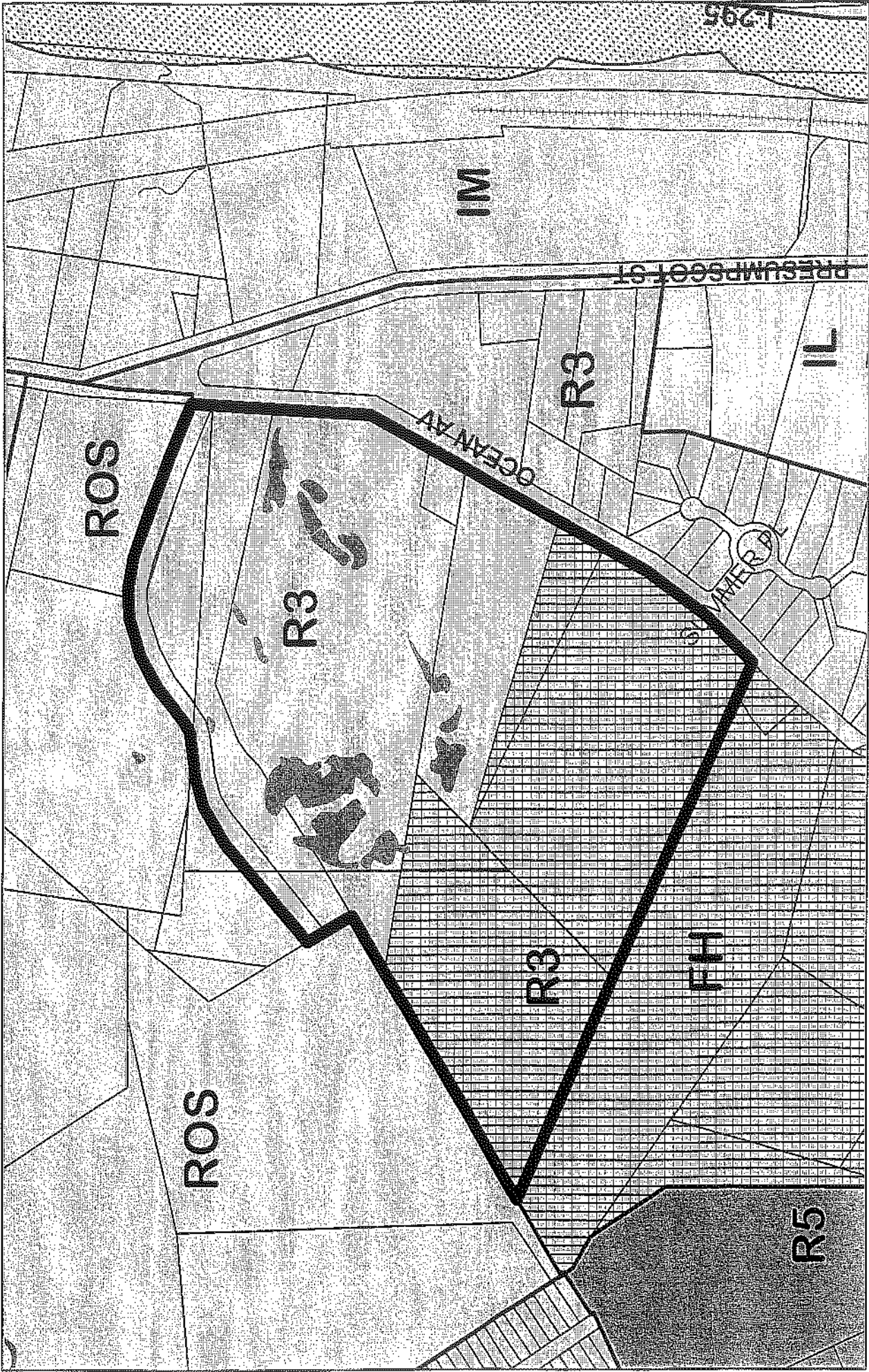
\_\_\_\_\_, as \_\_\_\_\_ of Dragon Products Company, Inc., personally appeared before me and acknowledged that the signature on this document was his free act and deed acting on behalf of Dragon Products Company, Inc.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

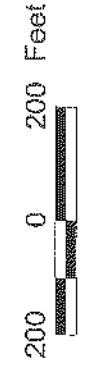
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# PROPOSED DRAGON CONTRACT ZONE

Proposed Contract Zone



Attachment 5

**Maximum Allowable Peak Particle Velocity (in./sec.) for Ground Vibration from Blasting Operations**

- Maine Department of Environmental Protection Article 8, Performance Standards for Quarries allows the following maximum peak particle velocity; 0 to 300 feet from the blast area is 1.25 in./sec. and 301 to 5000 feet from the blast area is 1.00 in./sec.
- Dragon shall reduce the allowable peak particle velocity maximum to ~~1.00~~ target of 0.75 in./sec., regardless of the distance from the blast area. *ok?*
- Dragon shall not be considered in violation of the contract should a blast result in peak particle velocity of 0.76 to 1.00 in./sec. Outside the Dragon site, but will be required to take necessary steps to reduce the peak particle velocity to the 0.75 in./sec. target on the next blast. If such an event occurs, Dragon shall immediately notify the City and provide a detailed descriptions of the action(s) to be taken to reduce the peak particle vibration. *How would we know?*
- If Dragon is repeatedly in (more than 2 consecutive blasts) excess of the 0.75 peak particle velocity target, then the City shall have the option of requiring a 3rd party peer review to determine what action Dragon shall be required to take prior to further blasting activity, with Dragon responsible for the cost of the peer review.
- This 0.75 in./sec. vibration standard may be reviewed by the CITY as part of its annual review after three full years of blasting, to determine if the experiences of the last three years would allow it to be relaxed to allow for fewer blasts or tightened to better protect the neighborhood. Dragon will be given a full opportunity to participate in this review process. Upon the recommendation of the Planning Board, the City Council may amend this standard, but the standard may not be dropped below 0.65 in./sec. This standard may continued to be reviewed every three years as set forth above. *Mark, is this #OK?*

5

## Attachment 6

### Quarry Blasting Plan

- The blasting plan shall contain the full details of the drilling and blasting patterns, controls, rock removal sequence, monitoring, and data reporting Dragon plans to use during the life of the quarry blasting operations. A blasting plan shall be submitted to the City at least one (1) month prior to the start of production blasting, or at least one (1) month prior to any changes Dragon proposes to make to the drilling and blasting methods used during the course of production blasting.
- All blasting plan submittals shall be approved by Dragon's 3rd party independent engineering firm or specialized blasting consultant.
- The blasting plan shall contain the following minimum information:
  - a) Plan and profile drawings showing proposed lifts, benches and blasting area sequence for the life of the quarry operation.
  - b) Plan and section view drawings of proposed drill pattern, including free face, burden, blast hole spacing, blast hole diameters, blast hole angles, lift height, and sub-drill depth.
  - c) Identification of explosives suppliers and blasting specialists.
  - d) Manufacturer's data sheets for all explosives, primers and initiators to be employed.
  - e) Procedures to inform the public and adjacent property.
  - f) Plan for 'misfire' of blast.
  - g) Form for reporting shot by shot blasting records.
  - h) Form for reporting vibration and airblast.
  - i) Blasting records to be maintained for each blast in accordance with MDEP 38 MRSA, 490-Z, 14 (L).
  - j) Description of monitoring instruments and characteristics, the individual (s) or firm operating the instruments, criteria to be used for locating the instruments, how the monitoring data will be analyzed, and who will be reporting the data and evaluation results.

## Attachment 7

### Pre-Blast Survey Protocol

- Prior to any blasting activity (including test blasts) at the Ocean Avenue quarry, Dragon shall provide the opportunity for Ocean Avenue neighbors, at no cost to the neighbor, to have a 'pre-blast survey' conducted to document the current structural conditions present at the residence.
- The 'Pre-blast survey' shall be offered to all property owners within 2,000 feet of the quarry, both in Portland and Falmouth. As offered, the 'pre-blast survey' exceeds both industry standards and M.D.E.P. requirements regarding distance from the quarry.
- A 3rd party independent engineering firm, specializing in this type of business, shall be contracted, to provide this service for Dragon. Dragon shall submit the qualifications and experience of the firm/individual retained to conduct the preblast surveys to the City for review. The City may, at its request, have the opportunity to meet with and interview the firm/individual conducting the surveys prior to the performance of this work.
- Utilizing Portland and Falmouth real estate tax assessment records, the first notification of the opportunity for a 'pre-blast survey' shall be by certified mail, with the next two attempts being hand delivered notices to the residence. The notification will request that the owner responds, either positive or negative, on an enclosed return self-addressed form. No surveys will be conducted without the owner's written permission, and shall only be conducted in the presence of the owner, or a representative designated by the owner in writing. This notification process shall be fully documented, with a summary provided to the City.
- Each survey shall involve approximately one to one and one-half hours, with a representative from the 3rd party firm visiting with the homeowner. During that visit, the surveyor will discuss blasting with the owner and what they should expect when a blast event occurs. The survey shall document the existing exterior and interior conditions of the buildings. The survey shall include documentation of interior subgrade and above grade accessible walls, ceilings, floors, roof, and visible exterior as viewed from the grade level. It will detail, by video or photographs, the existing structural, cosmetic, plumbing and electrical condition, and shall include all walls, and not be limited to areas in buildings showing existing damage. Notes and sketches may be made to highlight or enhance the photographic documentation. The condition report shall present engineering notes and photographs or video records. The report shall also summarize the condition of each building and define areas of concern. If the homeowner has any particular area of concern, the surveyor will make special effort to document.
- Dragon shall retain the original pre-blast survey records, with a copy provided to the homeowner if requested. Dragon shall provide access for the City to the survey records upon request, but only with written permission from the owner. While Dragon shall not,



without written permission from the owner, share any records with any 3rd party, Dragon does reserve the right to use the records in resolving any claims related to the property in question, and may make such records public if any claims lead to any litigation.

- All pre-blast surveys shall be completed a minimum of one month prior to starting the test blast program. At the completion of the pre-blast surveys, Dragon shall provide the City a list of all properties contacted for a pre-blast survey, indicating those who accepted or declined the survey.
- Dragon shall, upon receipt of notice of any change of property ownership, offer a survey to the new owners of properties that have previously declined such a survey.
- Dragon shall annually include a 'pre-blast survey' program summary with its year-end report to the City. This summary shall include the list of properties offered a survey, those who accepted or declined the offer, changes in ownership resulting in a requested survey, and any request from property owners for records of their survey.

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*How will  
they be notified?*

*It should be their  
responsibility, not ours,  
to determine a  
change in ownership.*

## Attachment 8

### Test Blast Program

- Prior to the implementation of any "Blasting Plan" for the Ocean Avenue quarry, Dragon shall conduct 'test blast program', consisting of a minimum of five (5) blasts, in order to build accurate, site-specific information regarding vibration (peak particle velocity) and air overpressure (airblast). This information shall be analyzed and utilized to provide guidance for design of blasts to meet the vibration controls for this project described in Attachment 5.
- Dragon shall contract with a 3rd party engineering firm or specialized blasting consultant to design, monitor and analyze the monitoring data for the test blast program. The qualifications and experience of this consultant shall be submitted to the City for review prior to commencement of this work.
- A written summary of the proposed test blast program shall be submitted to the City at least one (1) month before the test blasting is conducted. The test blast program submittal shall describe the details of the test blasting operations, sequence, monitoring and data evaluation, and shall include the following as a minimum: the overall intent and sequencing of proposed test blasts; test blast location(s); the number, spacing, diameter and depth of test blast holes; the type and weight of explosives planned for each test blast; the weight of explosives planned to be detonated within an 8 millisecond delay period; stemming material and depths; the type and number of vibration and airblast monitoring instruments; the proposed locations and layouts of monitoring instruments; a description of the parameters that will be monitored and recorded; a description of how the monitoring data will be evaluated and summarized; a description of what will be included in the blast program report; and the estimated schedule of the program.
- Prior to commencement of the 'test blast program', Dragon shall complete preblast survey requirements in accordance with Attachment 7 and City Landfill benchmark monitoring in accordance with Attachment 12.
- All blasts during the 'test blast program' shall follow the Blast Event' Protocol. This shall include notification of neighbors and City agencies of blast schedule, security of site during 'blast event' and monitoring during the 'blast event'. See Attachment 9 for details.
- At any time during the 'test blast program', upon request and reasonable notice, Dragon shall provide the City access to 'test blast' monitoring records. Upon completion of the 'test blast program, Dragon shall provide the City a summary report of blast program in accordance with the criteria described in the test blast program submittal.

- Once the 'test blast program' is complete (minimum of five (5) blasts) and adequate site-specific information is available, Dragon shall finalize the design the 'blasting plan' to be used in quarry operation. The content of the blasting plan is described in Attachment 6. This 'blasting plan' shall be provided to the City for review and discussion prior to implementation. As appropriate, this 'blast plan' shall be reviewed with M.D.E.P. prior to implementation.
- Dragon shall maintain all 'test blast' records for a minimum of 5 years after termination of quarry activities at Ocean Avenue.

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*but can cause  
vibrations  
exceed.*

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## Attachment 9

### Blast Event Protocol

- Dragon shall provide an annual schedule of tentative 'blast event' dates to all neighbors within 2000 feet of the quarry each year prior to any blasting activity. This tentative schedule shall also be provided to designated representatives of the City of Portland, the Police Department and the Fire Department. Included in this annual notification shall be the protocol for neighbor complaints, with contact names and telephone numbers at Dragon.
- The day before an actual 'blast event', Dragon shall attempt by telephone to notify neighbors who wish to be on a 'call list', of the time of the next day's blast. The designated City, Police and Fire representatives shall also be notified by telephone.
- On the morning of the 'blast event', Dragon's sub-contracted blasting company and 3rd party engineering company shall set blast monitoring equipment at predetermined locations around the quarry.
- On the morning of the 'blast event', Dragon shall attempt to notify all abutting neighbors who wish to be on the 'call list', of the time of the upcoming blast. The designated City, Police and Fire representatives shall also be notified by telephone of the blast time.
- At least 10 minutes prior to the blast, Dragon shall secure all ingress to the quarry property, and post personnel on Ocean Avenue to be prepared to stop vehicle pedestrian traffic passing by the Dragon site for the actual blast.
- A series of air horn warnings shall be used to warn of imminent blast as follows; 5 minutes prior to blast - 3 air horn signals; 1 minute prior to blast - 2 air horn signals, with all vehicle / pedestrian traffic passing in front of Dragon's site stopped until after the blast; and 1 air horn signal signifying All Clear. Ocean Avenue traffic will be released upon the All Clear signal.

Henry  
Ok  
?

## Attachment 10

### Blast Event Monitoring

- Blast monitoring shall be conducted in accordance with the provisions of the "Blasting Plan" - Attachment 6.
- Dragon shall provide vibration (peak particle velocity and frequency) and air overpressure (airblast) monitoring for all 'blast events' at the Ocean Avenue quarry. This monitoring shall begin with the 'Test Blast Program' and continue through the life of the quarry operation.
- Dragon shall provide the City with the qualifications and experience of the individual(s) doing the monitoring (if different than the test blast program).
- For each 'blast event', Dragon shall provide monitoring at a minimum of six different locations around the perimeter of the blast site/quarry. The blasting contractor shall maintain a minimum of three monitoring stations and a 3rd party engineering consultant, employed by Dragon, shall maintain an additional minimum of three monitoring stations. It is anticipated that two of the six monitoring stations shall be maintained at the Summer Place and Ocean Ridge neighborhoods.
- As described in the "Blasting Plan" - Attachment 6, prior to any blasting, Dragon's blasting contractor and 3rd party engineering consultant shall provide specifications of instruments to be used for blast monitoring to the City. This information shall include instrument manufacturer and model number, frequency range for ground motion and air overpressure, digitalization rate, method of calculating dominant frequency, and transducer attachments methods.
- Upon the completion of a blast, the information from the six monitoring stations shall be gathered immediately and analyzed by the 3rd party engineering consultant for compliance with the contract limits on vibration (peak particle velocity) and airblast overpressure (in db(L)).
- If vibration (peak particle velocity) or air overpressure (airblast) contract limits are exceeded, the City, and M.D.E.P. as appropriate, shall be notified and provided pertinent blasting record data. Prior to any future blast, Dragon shall provide the City, and as appropriate M.D.E.P., with details of steps to be taken to assure compliance with contract limits.
- Blasting records shall be maintained by Dragon for each blast in accordance with the provisions of the "Blasting Plan" - Attachment 6.

- Dragon shall maintain all data collected from monitoring stations, providing an annual summary of monitoring stations data with the annual report to the City. Prior to the annual report, Dragon shall provide the City, upon request and reasonable notice, access to monitoring records. This data shall also be available to M.D.E.P. upon request.
- Dragon shall maintain all blast monitoring records for a minimum of 5 years after termination of quarry operations at Ocean Avenue.

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## Attachment 11

### Monitoring of Portland's Ocean Avenue Landfill

- While the Jacques Whitford Engineering report of November 8, 2000 states that the Portland landfill integrity will not be jeopardized by Dragon's plan to blast on the adjacent quarry site, Dragon shall implement the following plan to monitor any potential impact the quarry blasting may have on the landfill cap.
- The Jacques Whitford Engineering report of May 8, 2001 states that the previous investigation by Sebago Techniques and the City of Portland has indicated that methane gas is not an issue at the landfill. Therefore Dragon does not propose methane gas monitoring.
- Dragon shall provide a 'benchmark' condition overview of the landfill cap prior to any blasting activities. This 'benchmark' overview shall be conducted by Dragon's environmental manager, in conjunction with a 3rd party engineering firm. Dragon will document with written notes and video records existing conditions such as rilling, slumping, leachate breakout, stressed vegetation or other features. The current condition data gathered will be compared to available cap information from the date of landfill closure. This 'benchmark' report will be reviewed with M.D.E.P. for comment and provided to the City for review.
- Upon commencement of blasting operations, Dragon shall monitor the cap on a monthly basis during the first two years of blasting activities, and at least 3 times per year for subsequent years. The cap monitoring shall be performed by the same parties (or qualified alternates) who conducted the 'benchmark' landfill review prior to blasting activity. As part of the cap monitoring, changes such as leachate breakouts, new areas of stressed vegetation, or new erosion features will be identified.
- If during the landfill cap monitoring program, changes are seen in the cap integrity, such as leachate breakouts, settlement or cracks that may be attributable to blasting activity, Dragon shall immediately notify the City and M.D.E.P. for review and comment prior to any further blasting activity.
- Annually, Dragon will provide the City with a summary of landfill cap monitoring data that will contain a description of leachate breakout, settlement cracks and other pertinent observations.
- Dragon shall maintain all records regarding landfill cap monitoring for the life of the quarry, making them available to the City and M.D.E.P. upon request. Dragon shall maintain all monitoring records for a minimum of 5 years after termination of quarry operations at Ocean Avenue.

## Attachment 12

### Groundwater Monitoring Plan

Dragon will implement the following groundwater monitoring program:

- Prior to any blasting activities, Dragon's environmental manager and a 3rd party engineering firm will provide 'benchmark' groundwater analysis from surface water sources and the same 5 existing landfill monitoring well locations used for the June 11, 1996 report to the MeDEP by Sebago Technics. These parameters include specific conductance, pH, sulfate, chloride, calcium, sodium, potassium, bicarbonate, magnesium, iron, and total dissolved solids (TDS). This 'benchmark' groundwater data will be compared with available groundwater data from the date of landfill closure, to determine if any changes since the closure have occurred. This 'benchmark' data will be reviewed with D.E.P. prior to any quarry activity and provided to the City for review

*clarify sampling*

*+ benchmark analysis - same as above*

Upon commencement of the blasting operations, Dragon will provide water level monitoring of the landfill monitoring wells on the same schedule that the landfill cap monitoring is performed. Additional ground water sampling and analysis will be conducted at high water period (April), low water period (July or August) and at the end of the season.

- Ground water monitoring data will be summarized in tables and provided to the City and to MEDEP on an annual basis.
- In accordance with D.E.P. quarry standards that specify a minimum setback of excavation from 100 to 1,000 feet from a well, Dragon's quarry is at least double that distance with no drinking water well identified within 2,000 feet. There has been no data provided that suggests that there is a cause of concern for well water quality at distances in excess of 2,000 feet, and there will be no groundwater testing at those distances.

*Will we  
meet groundwater  
standard of  
Site Plan  
Ordinance?*



## Attachment 13

### Quarry Reclamation

- The Ocean Avenue Quarry is subject to reclamation requirements that are consistent with 38 MRSA 490-Z Performance Standards for Quarries. Reclamation, as defined under Article 8A, means "the rehabilitation of the area of land affected by mining, including, but not limited to, stabilization of slopes and creation of safety benches, the planting of forests, the seeding of grasses..." The objective of the reclamation standard is to minimize the impact posed by an affected area.
- Dragon will be required to restore the affected lands associated with the Ocean Ave operation to a condition that minimizes the safety risks posed by the site, is protective of future impacts to the environment (from fugitive dusts, soil and sediment run-off, etc) and is consistent with the intended future use of the site (residential, open-space, commercial or industrial use).
- While a detailed reclamation plan will be dependent on the final configuration of the quarry, Dragon has an obligation to stabilize rock slopes to prevent rockfalls and to stabilize overburden in accordance with the best management practices for erosion and sedimentation control. In meeting the performance standard for quarry reclamation, Dragon will be required to address the following at the Ocean Avenue Quarry:
  - Quarry faces, will be left in a condition that minimizes the possibility of rock falls. Loose rock may be controlled by the use of blasting or scaling. Highwalls will be reduced using safety benches to reduce face heights to a maximum of 30 feet.
  - Exposed overburden or soil will be stabilized to minimize erosion and promote sedimentation control. Slopes will be graded to minimize run-off and exposed soil will be mulched or otherwise covered until a vegetative cover is established.
  - A vegetative cover will be established by seeding affected land except for quarry walls and flooded areas. Vegetative cover used in reclamation may consist of grasses, legumes, herbaceous or woody plants, shrubs, trees or a mixture of these.
  - Unusable structures will be removed and unusable access roads, haul roads and other support roads will be reclaimed.
  - Affected lands will be reclaimed within 2 years after final operational grading has been reached.

## Attachment 14

### Protocol for Complaints, Damage Claims & Resolution

- On an annual basis, Dragon shall provide neighbors of the Ocean Avenue quarry a list of contact names, addresses and telephone numbers of Dragon personnel to be notified in the event of a complaint regarding the quarry operation or a claim for damages. This list will include the supervisor of the quarry, Dragon's environmental manager and Dragon's divisional vice-president. This list will be updated annually and provided to the City and neighbors at the time of the annual review meeting prior to a new season of blasting.
- Dragon shall contact any individual filing a complaint about its operations within two business days to discuss the nature of the complaint and an appropriate manner in which to address the specific issue, and depending on the nature and magnitude of the complaint, determine if it is necessary to schedule a meeting to further discuss to complaint. If necessary, such a meeting may include representatives from M.D.E.P., City of Portland, drilling and blasting contractor, project engineering firms, and insurance and legal representatives of any party.
- Dragon shall investigate all complaints about its operations and respond, in writing, within 10 days of the registering of the complaint. While the written response may not resolve the complaint, it shall include the history of the complaint, status or work done on the complaint to date and any follow-up work planned, with a copy being provided to the City upon request and/or as part of Dragon's annual report to the City.
- Dragon shall acknowledge receipt of any written claim for damages as a result of its operations within 2 business days of receipt of the written claim. Claims shall include a written estimate of the repair costs by an independent party whenever possible. Claims will be much easier to investigate if the claimant has had a 'pre-blast survey' done of their property as described in Attachment 7.
- Dragon shall inspect the alleged damage with the property owner within 5 business days of receipt of the written claim, assuming the claimant provides Dragon with reasonable access to area of alleged damage. In the event of broken windows that are clearly the result of blasting, Dragon shall arrange for glass replacement at the earliest possible schedule of a glass company. Dragon shall respond within 10 business days of this inspection depending on the amount of the claim as follows:

For all property damage claims of \$2,500 or less, Dragon will handle the claim in a 'self-insured' manner. Where clear evidence is present to show that the property damage is the result of Dragon activities, full restitution shall be paid based on a written estimate of repair costs by an independent third party or for such amount as can be agreed to by Dragon and the claimant. Dragon shall have the option to make the repairs itself if it believes the written estimate of repair costs to be too high. Dragon will pay the restitution to claimant within 10 business days of the inspection or Dragon will do the

repair work itself within 45 days of the inspection, assuming the claimant cooperates by providing reasonable access to the damaged property. Dragon will provide the claimant a written reason why no restitution is offered within 10 business days of the inspection if it does not believe that it is responsible for the damage. The resolution of such property claims will not represent an admission of fault or liability by Dragon, and will not prevent Dragon from defending future claims that may arise. The claimant will reserve all rights against Dragon if no agreement is reached. The acceptance of any such restitution will not preclude a claimant from pursuing future claims based on future activities.

For all property damage claims in excess of this \$2,500 'self-insured' level, Dragon shall promptly arrange for the appropriate insurance representatives to appraise the damage and discuss the claim with the claimant. Dragon shall instruct the insurance carrier to make a determination on the claim as soon as possible. If through this investigation, Dragon is clearly found to be responsible for the property damage, Dragon shall instruct the insurance carrier to offer prompt settlement of the claim. If through this investigation, there are issues on Dragon's responsibility for the damage, these issues shall be promptly furnished to the claimant in writing, so that the claimant can make an informed decision on pursuing the claim. It is Dragon's intent to have such review and investigation complete within 10 business days of receipt of the written claim, with an initial written decision on the claim provided to the claimant within 10 business days after the inspection by the insurance agents.

- Dragon shall provide the City, on an annual basis, a summary report of all complaints, damage claims and resolutions from the previous year of quarry operation. Dragon shall maintain all records regarding complaints for a minimum of 5 years, with the records available to the City upon request.

## Attachment 15

### Annual Quarry Report to the City of Portland

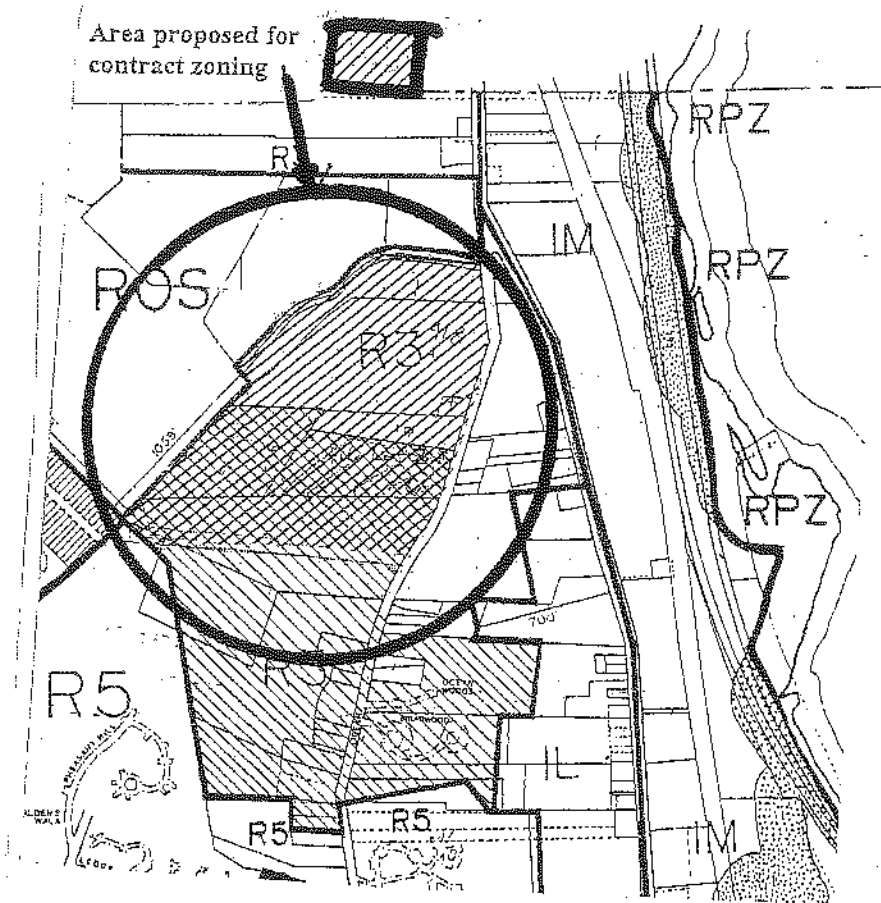
- On or before February 1 of each year, Dragon shall provide an annual summary report to the City of Portland regarding the operation of the Ocean Avenue quarry during the previous year, with all supporting data to this summary available upon request. This report shall include, but not be limited to the following:
  - a) Neighborhood pre-blast survey summary
  - b) Ocean Avenue landfill monitoring summary
  - c) Quarry blast event data - including blast monitoring summary
  - d) Complaints, Claims and Resolution summary
  - e) Tentative blast event schedule for the upcoming year
- Dragon shall, upon request, provide a copy of this annual quarry report to Ocean Avenue neighbors.
- On or before March 15th of each year, prior to blasting activities in the new year, and at the City's convenience, Dragon shall schedule an annual 'neighborhood meeting', to allow for public discussion of the previous year's quarry activities. Dragon representatives, including individuals providing subcontracted blasting and engineering services, will be in attendance to provide a review of the previous year and discuss plans for the upcoming quarry season.
- Dragon shall provide the City of Portland such an annual summary report until termination of quarry activities at the Ocean Avenue site, with copies of this annual report available to neighbors upon request. All supporting data for this annual summary report shall be available for review upon request and shall be maintained for a minimum of 5 years upon termination of quarry activities.
- Upon request, at any time during the year, Dragon shall provide the City a summary of available quarry data year-to-date, with the supporting detail available for review upon request.

LEGAL NOTICE

LEGAL NOTICE

PORTLAND PLANNING BOARD  
PUBLIC NOTICE

Notice is hereby given that the Portland Planning Board will hold a public hearing Tuesday evening, August 1, 2000, 6:00 p.m. in City Council Chambers, City Hall, Portland, Maine to consider a proposed contract zone by Dragon Products Company, Inc. as shown on the fragmentary map below:



The draft contract is attached.

Further information on this development, including exhibits to the contract, can be obtained at the Planning Department office, City Hall, Basement, or by calling 874-8720.

Jaimy Caron, Chair  
Portland Planning Board

## DRAGON PRODUCTS COMPANY, INC. AGREEMENT

This document is an Agreement made by **DRAGON PRODUCTS COMPANY, INC.**, a corporation with a business address of 38 Preble Street, P.O. Box 1521, Portland, Maine 04104 ("DRAGON").

WHEREAS, DRAGON requested a rezoning of its property located at Ocean Avenue, in the **City of Portland**, a Maine municipality located in Cumberland County and State of Maine ("CITY" or "Portland") in order to permit mining operations on the site of its legally existing nonconforming concrete plant; and

WHEREAS, DRAGON'S property is shown on Portland Assessor's Parcels: Map 416-A, Block A, Lot 2; Map 417, Block A, Lots 4, 5, 10 and 11; and Map 418, Block A, Lots 1, 3, 4, 5, 6, 9 and 10 ("Property"); and

WHEREAS, the Portland Planning Board, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberations, recommended the rezoning of the Property, subject, however, to certain conditions; and

WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY'S comprehensive land use plan and consistent with the existing and permitted uses within the original R-3 zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the following plans and documents are attached to this Agreement and incorporated into this Agreement by reference:

- Attachment 1: City Zoning Map change (to be prepared by City)
- Attachment 2: Quarry Plan View (F-1) dated June 5, 2000
- Attachment 3: Plan View of Proposed Berm (F-2) dated June 5, 2000
- Attachment 4: Ocean Avenue Longitudal and Cross Sections (F-3) dated June 5, 2000
- Attachment 5: Reclamation Standards for Portland Quarry
- Attachment 6: Maine DEP Performance Standards for Quarries (20 pages)
- Attachment 7: Blasting Plan (5 pages)
- Attachment 8: Protocol for Complaints and Resolutions

NOW, THEREFORE, in consideration of the zone change made by the CITY, DRAGON hereby agrees as follows:

1. Site Development: The Property shall be developed substantially in accordance with the site plans and elevations shown on Attachments 2-4. DRAGON shall:
  - a. Remove the existing batch plant and silos, truck fuel depot, conveyor, concrete retaining wall and temporary ditch, and rock crushing facility.
  - b. Relocate its batch plant and related operations no closer than 350 feet to Ocean Avenue, in the "approximate limit of operation area" shown on Attachment 2.
  - c. Locate the new rock crusher facility no closer than 750 feet to Ocean Avenue in the operations area shown on Attachment 2, and enclose any rock crushing operations within an insulated building.
  - d. A new earthen berm, fence, paved entrance, drainage ditch, and climbing lane will be constructed along the west side of Ocean Avenue as shown on Attachments 2-4. The final berm design, landscape planting and schedule will be determined by the Planning Board in its site plan

review, after consultation with the City Arborist.

e. DRAGON shall relocate the entrance driveway to the premises, and shall create a slip lane for slow-moving traffic along Ocean Avenue as shown on Attachments 2 and 3. To the extent that any of the new roadway or drainage improvements are located on land of DRAGON, it will deed that portion of its land to the CITY.

f. Develop a stormwater management plan for the entire site, including all improvements along Ocean Avenue and within the operations area according to MeDEP performance standards.

Provided, however, that such development shall be subject to full Site Plan review and approval by the Planning Board, which may approve modifications to these plans as part of the review process.

2. Authorized Uses: DRAGON shall only be authorized to establish and maintain the following uses or any combination of the uses on the Property, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth in this Agreement and established by State and Federal law:

a. Mining of stone in the "quarry expansion area", including blasting, and crushing of stone for use in manufacture of concrete on the site.

b. Concrete manufacture and processing.

c. Outdoor storage of materials, including rock piles utilized in the concrete manufacturing, material manufactured on the site, including concrete blocks produced as an incidental part of its operations, and related machinery and equipment.

e. All concrete trucks shall be hosed down before exiting the operations area on the Property to reduce the amount of debris and residue tracked onto Ocean Avenue.



f. Vehicle repair and storage and office operations within the existing Dragon Products Company garage facilities (3 bays) shown on Attachment 2.

3. Timing of Uses on Property: Prior to the commencement of any blasting, mining or rock crushing, Dragon shall obtain from the City a Certificate of Occupancy, verifying that all site alterations described in Section 1 and as otherwise approved by the Planning Board have been completed. DRAGON shall discontinue use of its existing batch plant within 30 days of its new batch plant being fully operational, and shall remove its existing batch plant from the Property within 180 days of its use being discontinued.

4. Time Limit for Certain Site Improvements: Dragon shall apply for Site Plan Approval for the site changes described in Section 1 (a, c-f) (all site improvements except the rock crusher) within one year of the rezoning of the Property by the City Council, and shall complete all approved site improvements within two years of final Planning Board approval of the site plan, or this contract shall automatically terminate and the Property shall automatically revert to the R-3 or any successor zone classification.

5. Natural Buffer Areas: The existing trees and other natural vegetation in the "existing wooded buffer strip" on the south side of the site and the "existing vegetation" on the north side of the site shown on Attachment 2 shall remain in their natural state. These areas, or any portions of them, may not be separately conveyed apart from the Property as a whole, while any blasting, mining, concrete manufacturing, or other uses not consistent with the underlying R-3 or successor zone are being conducted on the Property.

6. Limits on Blasting: DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. In no event shall more than four (4) individual blasts per month be permitted. All blasting and rock crushing on the site shall occur on Monday through Friday between the hours of 9:00 a.m. and 4:00 p.m. and between the months of March and November. No blasting or warning signals for blasting shall be done between 7:00 a.m. and 9:00 a.m. or between 2:00 p.m. and 4:00 p.m. on any day when the City of Portland public

schools are in session.

7. Blasting Operations: DRAGON agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including those set forth in 38 M.R.S.A. §§490-W to 490EE (Attachment 6) as it may be amended, except where municipal standards adopted by the CITY which are not otherwise described in this Agreement are more restrictive, the CITY standards shall apply. The MeDEP standards shall include, but not be limited to:

- a. Blasting standards described in §490-Z (14), including preblast surveys as described in subsection (F), sound standards described in subsection (H), vibration standards described in subsections (I) - (K), and blasting records as described in subsection (L), including records of peak particle velocity and decibels for each blast.
- b. Dust standards described §490-Z (12)
- c. Reclamation standards described in §490-Z (13)

All blasting shall also be conducted in accordance with the Blasting Plan, Pre-blast Inspection Procedures, Drilling and Blasting Procedures Blasting Records standards shown on Attachment 7.

8. Complaint Protocol: DRAGON shall maintain the complaint resolution protocol and City reporting protocol described in Attachment 8. Furthermore, in the event of prolonged and chronic complaints by area residents of substantial noncompliance with the terms of this Agreement by DRAGON, then the CITY may ask the MeDEP to review DRAGON's blasting operations for compliance with this Agreement. If DRAGON fails to implement any changes recommended by the MeDEP within a reasonable time period, then: (a) the CITY may hire third-party blasting engineers to conduct a 'peer review' of DRAGON's blasting operations and compliance with this Agreement, and the CITY's reasonable costs for such engineers shall be reimbursed by DRAGON; and/or (b) the CITY may seek to enforce this Agreement pursuant to Section 17.

9. Reclamation of Site: Reclamation of the Property into a vegetated, useable condition shall be completed substantially in accordance with the reclamation plan described in Attachment 5 within 2 years of completion of the mining on the Property; provided, however, that such plan shall be subject to full review and approval by the Planning Board before being implemented.

10. City Zoning Standards: DRAGON shall meet all IL zoning standards contained in sections 14-234, 14-235, and 14-236 of the Portland City Code, except as follows:

- a. No new fence shall be required pursuant to 14-235(6) except as shown on Attachments 2-4 and as may be required by the Planning Board during final site plan review.
- b. Outside storage of sand and stone shall not be required to meet the standards of §14-235(10).
- c. Vibration standards in §14-236(3) shall not apply to blasting, and IM vibration standards found in §14-252(3) shall apply to all other operations.
- d. Noise standards in §14-236(1) shall not apply to blasting.
- e. The existing concrete batch plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is removed from the Property, but the new concrete production building shall comply with §14-236(1) when measured at property lines of the Property.

11. IL Zoning Standards: Except as expressly modified in this Agreement, the use and occupancy of the Property shall be governed by and comply with the IL zoning provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

12. Parcels east of Ocean Avenue: As long as it operates its existing concrete batch plant,

DRAGON shall maintain ownership of the parcels east of Ocean Avenue across from the Property, more particularly described as Tax Map 418-A, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

13. DRAGON's Successors: If DRAGON sells or transfers the Property to any new owner in the future which wants to continue the blasting, mining and concrete manufacturing operations, then any prospective new owner must receive written approval from the City of Portland Planning Department as to that owner's technical and financial abilities to comply with the terms of this contract, and the new owner must sign a copy of this Agreement agreeing to comply with all of its terms.

14. Record Notice: DRAGON agrees to record this Agreement in the Cumberland County Registry of Deeds, and to include a reference to it in any deed conveying any of the Property.

15. Enforceability: The above stated restrictions, provisions and conditions are an essential part of the rezoning, shall run with and bind the subject premises, shall bind DRAGON, its successors and assigns, as owner of the Property or any part thereof or interest therein, and any party in possession or occupancy of the Property or any part thereof, and shall inure to the benefit of and be enforceable by the CITY, by and through its duly authorized representatives.

16. Severability: If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

17. Default by Dragon: In the event that the CITY claims that DRAGON or any successor has failed to utilize the Property in accordance with this Agreement, then it may give DRAGON written notice of the default claimed by the CITY. (**Optional**: The City Planning Staff may seek a hearing on these issues before the Planning Board at any time.) If DRAGON does not correct the defaults in a timely manner to the CITY's satisfaction, then the CITY may institute a judicial enforcement action for the breach of this Agreement. If it is determined in such judicial enforcement action that DRAGON has breached this Agreement, and DRAGON fails to comply with the Agreement in a timely manner after such judicial determination, then the City Planning Staff may also recommendation to the City Council that this Agreement be terminated, requiring

a cessation of the blasting and mining use permitted under this terms of this Agreement; provided that the termination of the contract will not require cessation of the concrete manufacturing and processing uses conducted on the site prior to the date of execution of this Agreement, or as relocated pursuant to this Agreement.

18. This Contract shall be executed simultaneously with Portland City Council approval of the rezoning of the Property.

WITNESS:

DRAGON PRODUCTS COMPANY, INC.

\_\_\_\_\_ By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss.

Date: \_\_\_\_\_, 2000

\_\_\_\_\_, as \_\_\_\_\_ of Dragon Products Company, Inc, personally appeared before me and acknowledged that the signature on this document was his free act and deed acting on behalf of Dragon Products Company, Inc.

Before me,


\_\_\_\_\_  
Notary Public/Attorney at Law

Print Name: \_\_\_\_\_

Draft: July 17, 2000  
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## Attachment 5

### Maximum Allowable Peak Particle Velocity (in./sec.) for Ground Vibration from Blasting Operations

- Maine Department of Environmental Protection Article 8, Performance Standards for Quarries allows the following maximum peak particle velocity; 0 to 300 feet from the blast area is 1.25 in./sec. and 301 to 5000 feet from the blast area is 1.00 in./sec.
- Dragon shall reduce the allowable peak particle velocity maximum to a ~~target~~  of 0.75 in./sec., regardless of the distance from the blast area. *ok?*
- Dragon shall not be considered in violation of the contract should a blast result in peak particle velocity of 0.76 to 1.00 in./sec. Outside the Dragon site, but will be required to take necessary steps to reduce the peak particle velocity to the 0.75 in./sec. target on the next blast. If such an event occurs, Dragon shall immediately notify the City and provide a detailed descriptions of the action(s) to be taken to reduce the peak particle vibration. *How would we know?*
- If Dragon is repeatedly in (more than 2 consecutive blasts) excess of the 0.75 peak particle velocity target, then the City shall have the option of requiring a 3rd party peer review to determine what action Dragon shall be required to take prior to further blasting activity, with Dragon responsible for the cost of the peer review.
- This 0.75 in./sec. vibration standard may be reviewed by the CITY as part of its annual review after three full years of blasting, to determine if the experiences of the last three years would allow it to be relaxed to allow for fewer blasts or tightened to better protect the neighborhood. Dragon will be given a full opportunity to participate in this review process. Upon the recommendation of the Planning Board, the City Council may amend this standard, but the standard may not be dropped below 0.65 in./sec. This standard may continued to be reviewed every three years as set forth above. *Mark, is this #OK?*

0.5

## Attachment 6

### Quarry Blasting Plan

- The blasting plan shall contain the full details of the drilling and blasting patterns, controls, rock removal sequence, monitoring, and data reporting Dragon plans to use during the life of the quarry blasting operations. A blasting plan shall be submitted to the City at least one (1) month prior to the start of production blasting, or at least one (1) month prior to any changes Dragon proposes to make to the drilling and blasting methods used during the course of production blasting.
- All blasting plan submittals shall be approved by Dragon's 3rd party independent engineering firm or specialized blasting consultant.
- The blasting plan shall contain the following minimum information:
  - a) Plan and profile drawings showing proposed lifts, benches and blasting area sequence for the life of the quarry operation.
  - b) Plan and section view drawings of proposed drill pattern, including free face, burden, blast hole spacing, blast hole diameters, blast hole angles, lift height, and sub-drill depth.
  - c) Identification of explosives suppliers and blasting specialists.
  - d) Manufacturer's data sheets for all explosives, primers and initiators to be employed.
  - e) Procedures to inform the public and adjacent property.
  - f) Plan for 'misfire' of blast.
  - g) Form for reporting shot by shot blasting records.
  - h) Form for reporting vibration and airblast.
  - i) Blasting records to be maintained for each blast in accordance with MDEP 38 MRSA, 490-Z, 14 (L).
  - j) Description of monitoring instruments and characteristics, the individual (s) or firm operating the instruments, criteria to be used for locating the instruments, how the monitoring data will be analyzed, and who will be reporting the data and evaluation results.



## Attachment 7

### Pre-Blast Survey Protocol

- Prior to any blasting activity (including test blasts) at the Ocean Avenue quarry, Dragon shall provide the opportunity for Ocean Avenue neighbors, at no cost to the neighbor, to have a 'pre-blast survey' conducted to document the current structural conditions present at the residence.
- The 'Pre-blast survey' shall be offered to all property owners within 2,000 feet of the quarry, both in Portland and Falmouth. As offered, the 'pre-blast survey' exceeds both industry standards and M.D.E.P. requirements regarding distance from the quarry.
- A 3rd party independent engineering firm, specializing in this type of business, shall be contracted, to provide this service for Dragon. Dragon shall submit the qualifications and experience of the firm/individual retained to conduct the preblast surveys to the City for review. The City may, at its request, have the opportunity to meet with and interview the firm/individual conducting the surveys prior to the performance of this work.
- Utilizing Portland and Falmouth real estate tax assessment records, the first notification of the opportunity for a 'pre-blast survey' shall be by certified mail, with the next two attempts being hand delivered notices to the residence. The notification will request that the owner responds, either positive or negative, on an enclosed return self-addressed form. No surveys will be conducted without the owner's written permission, and shall only be conducted in the presence of the owner, or a representative designated by the owner in writing. This notification process shall be fully documented, with a summary provided to the City.
- Each survey shall involve approximately one to one and one-half hours, with a representative from the 3rd party firm visiting with the homeowner. During that visit, the surveyor will discuss blasting with the owner and what they should expect when a blast event occurs. The survey shall document the existing exterior and interior conditions of the buildings. The survey shall include documentation of interior subgrade and above grade accessible walls, ceilings, floors, roof, and visible exterior as viewed from the grade level. It will detail, by video or photographs, the existing structural, cosmetic, plumbing and electrical condition, and shall include all walls, and not be limited to areas in buildings showing existing damage. Notes and sketches may be made to highlight or enhance the photographic documentation. The condition report shall present engineering notes and photographs or video records. The report shall also summarize the condition of each building and define areas of concern. If the homeowner has any particular area of concern, the surveyor will make special effort to document.
- Dragon shall retain the original pre-blast survey records, with a copy provided to the homeowner if requested. Dragon shall provide access for the City to the survey records upon request, but only with written permission from the owner. While Dragon shall not,

without written permission from the owner, share any records with any 3rd party, Dragon does reserve the right to use the records in resolving any claims related to the property in question, and may make such records public if any claims lead to any litigation.

- All pre-blast surveys shall be completed a minimum of one month prior to starting the test blast program. At the completion of the pre-blast surveys, Dragon shall provide the City a list of all properties contacted for a pre-blast survey, indicating those who accepted or declined the survey.
- Dragon shall, upon receipt of notice of any change of property ownership, offer a survey to the new owners of properties that have previously declined such a survey.
- Dragon shall annually include a 'pre-blast survey' program summary with its year-end report to the City. This summary shall include the list of properties offered a survey, those who accepted or declined the offer, changes in ownership resulting in a requested survey, and any request from property owners for records of their survey.

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How will  
they be notified?

It should be their  
responsibility, not ours,  
to determine a  
change in ownership.

## Attachment 8

### Test Blast Program

- Prior to the implementation of any "Blasting Plan" for the Ocean Avenue quarry, Dragon shall conduct 'test blast program', consisting of a minimum of five (5) blasts, in order to build accurate, site-specific information regarding vibration (peak particle velocity) and air overpressure (airblast). This information shall be analyzed and utilized to provide guidance for design of blasts to meet the vibration controls for this project described in Attachment 5.
- Dragon shall contract with a 3rd party engineering firm or specialized blasting consultant to design, monitor and analyze the monitoring data for the test blast program. The qualifications and experience of this consultant shall be submitted to the City for review prior to commencement of this work.
- A written summary of the proposed test blast program shall be submitted to the City at least one (1) month before the test blasting is conducted. The test blast program submittal shall describe the details of the test blasting operations, sequence, monitoring and data evaluation, and shall include the following as a minimum: the overall intent and sequencing of proposed test blasts; test blast location(s); the number, spacing, diameter and depth of test blast holes; the type and weight of explosives planned for each test blast; the weight of explosives planned to be detonated within an 8 millisecond delay period; stemming material and depths; the type and number of vibration and airblast monitoring instruments; the proposed locations and layouts of monitoring instruments; a description of the parameters that will be monitored and recorded; a description of how the monitoring data will be evaluated and summarized; a description of what will be included in the blast program report; and the estimated schedule of the program.
- Prior to commencement of the 'test blast program', Dragon shall complete preblast survey requirements in accordance with Attachment 7 and City Landfill benchmark monitoring in accordance with Attachment 12.
- All blasts during the 'test blast program' shall follow the Blast Event' Protocol. This shall include notification of neighbors and City agencies of blast schedule, security of site during 'blast event' and monitoring during the 'blast event'. See Attachment 9 for details.
- At any time during the 'test blast program', upon request and reasonable notice, Dragon shall provide the City access to 'test blast' monitoring records. Upon completion of the 'test blast program, Dragon shall provide the City a summary report of blast program in accordance with the criteria described in the test blast program submittal.

- Once the 'test blast program' is complete (minimum of five (5) blasts) and adequate site-specific information is available, Dragon shall finalize the design the 'blasting plan' to be used in quarry operation. The content of the blasting plan is described in Attachment 6. This 'blasting plan' shall be provided to the City for review and discussion prior to implementation. As appropriate, this 'blast plan' shall be reviewed with M.D.E.P. prior to implementation.
- Dragon shall maintain all 'test blast' records for a minimum of 5 years after termination of quarry activities at Ocean Avenue.

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*but mine could  
with vibration  
exceed!*

## Attachment 9

### Blast Event Protocol

- Dragon shall provide an annual schedule of tentative 'blast event' dates to all neighbors within 2000 feet of the quarry each year prior to any blasting activity. This tentative schedule shall also be provided to designated representatives of the City of Portland, the Police Department and the Fire Department. Included in this annual notification shall be the protocol for neighbor complaints, with contact names and telephone numbers at Dragon.
- The day before an actual 'blast event', Dragon shall attempt by telephone to notify neighbors who wish to be on a 'call list', of the time of the next day's blast. The designated City, Police and Fire representatives shall also be notified by telephone.
- On the morning of the 'blast event', Dragon's sub-contracted blasting company and 3rd party engineering company shall set blast monitoring equipment at predetermined locations around the quarry.
- On the morning of the 'blast event', Dragon shall attempt to notify all abutting neighbors who wish to be on the 'call list', of the time of the upcoming blast. The designated City, Police and Fire representatives shall also be notified by telephone of the blast time.
- At least 10 minutes prior to the blast, Dragon shall secure all ingress to the quarry property, and post personnel on Ocean Avenue to be prepared to stop vehicle pedestrian traffic passing by the Dragon site for the actual blast.
- A series of air horn warnings shall be used to warn of imminent blast as follows; 5 minutes prior to blast - 3 air horn signals; 1 minute prior to blast - 2 air horn signals, with all vehicle / pedestrian traffic passing in front of Dragon's site stopped until after the blast; and 1 air horn signal signifying All Clear. Ocean Avenue traffic will be released upon the All Clear signal.

} Harry  
Ok  
?

## Attachment 10

### Blast Event Monitoring

- Blast monitoring shall be conducted in accordance with the provisions of the "Blasting Plan" - Attachment 6.
- Dragon shall provide vibration (peak particle velocity and frequency) and air overpressure (airblast) monitoring for all 'blast events' at the Ocean Avenue quarry. This monitoring shall begin with the 'Test Blast Program' and continue through the life of the quarry operation.
- Dragon shall provide the City with the qualifications and experience of the individual(s) doing the monitoring (if different than the test blast program).
- For each 'blast event', Dragon shall provide monitoring at a minimum of six different locations around the perimeter of the blast site/quarry. The blasting contractor shall maintain a minimum of three monitoring stations and a 3rd party engineering consultant, employed by Dragon, shall maintain an additional minimum of three monitoring stations. It is anticipated that two of the six monitoring stations shall be maintained at the Summer Place and Ocean Ridge neighborhoods.
- As described in the "Blasting Plan" - Attachment 6, prior to any blasting, Dragon's blasting contractor and 3rd party engineering consultant shall provide specifications of instruments to be used for blast monitoring to the City. This information shall include instrument manufacturer and model number, frequency range for ground motion and air overpressure, digitalization rate, method of calculating dominant frequency, and transducer attachments methods.
- Upon the completion of a blast, the information from the six monitoring stations shall be gathered immediately and analyzed by the 3rd party engineering consultant for compliance with the contract limits on vibration (peak particle velocity) and airblast overpressure (in db(L)).
- If vibration (peak particle velocity) or air overpressure (airblast) contract limits are exceeded, the City, and M.D.E.P. as appropriate, shall be notified and provided pertinent blasting record data. Prior to any future blast, Dragon shall provide the City, and as appropriate M.D.E.P., with details of steps to be taken to assure compliance with contract limits.
- Blasting records shall be maintained by Dragon for each blast in accordance with the provisions of the "Blasting Plan" - Attachment 6.

- Dragon shall maintain all data collected from monitoring stations, providing an annual summary of monitoring stations data with the annual report to the City. Prior to the annual report, Dragon shall provide the City, upon request and reasonable notice, access to monitoring records. This data shall also be available to M.D.E.P. upon request.
  
- Dragon shall maintain all blast monitoring records for a minimum of 5 years after termination of quarry operations at Ocean Avenue.

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## Attachment 11

### Monitoring of Portland's Ocean Avenue Landfill

- While the Jacques Whitford Engineering report of November 8, 2000 states that the Portland landfill integrity will not be jeopardized by Dragon's plan to blast on the adjacent quarry site, Dragon shall implement the following plan to monitor any potential impact the quarry blasting may have on the landfill cap.
- The Jacques Whitford Engineering report of May 8, 2001 states that the previous investigation by Sebago Techniques and the City of Portland has indicated that methane gas is not an issue at the landfill. Therefore Dragon does not propose methane gas monitoring.
- Dragon shall provide a 'benchmark' condition overview of the landfill cap prior to any blasting activities. This 'benchmark' overview shall be conducted by Dragon's environmental manager, in conjunction with a 3rd party engineering firm. Dragon will document with written notes and video records existing conditions such as rilling, slumping, leachate breakout, stressed vegetation or other features. The current condition data gathered will be compared to available cap information from the date of landfill closure. This 'benchmark' report will be reviewed with M.D.E.P. for comment and provided to the City for review.
- Upon commencement of blasting operations, Dragon shall monitor the cap on a monthly basis during the first two years of blasting activities, and at least 3 times per year for subsequent years. The cap monitoring shall be performed by the same parties (or qualified alternates) who conducted the 'benchmark' landfill review prior to blasting activity. As part of the cap monitoring, changes such as leachate breakouts, new areas of stressed vegetation, or new erosion features will be identified.
- If during the landfill cap monitoring program, changes are seen in the cap integrity, such as leachate breakouts, settlement or cracks that may be attributable to blasting activity, Dragon shall immediately notify the City and M.D.E.P. for review and comment prior to any further blasting activity.
- Annually, Dragon will provide the City with a summary of landfill cap monitoring data that will contain a description of leachate breakout, settlement cracks and other pertinent observations.
- Dragon shall maintain all records regarding landfill cap monitoring for the life of the quarry, making them available to the City and M.D.E.P. upon request. Dragon shall maintain all monitoring records for a minimum of 5 years after termination of quarry operations at Ocean Avenue.



## Attachment 12

### Groundwater Monitoring Plan

Dragon will implement the following groundwater monitoring program:

- Prior to any blasting activities, Dragon's environmental manager and a 3rd party engineering firm will provide 'benchmark' groundwater analysis from surface water sources and the same 5 existing landfill monitoring well locations used for the June 11, 1996 report to the MeDEP by Sebago Technics. These parameters include specific conductance, pH, sulfate, chloride, calcium, sodium, potassium, bicarbonate, magnesium, iron, and total dissolved solids (TDS). This 'benchmark' groundwater data will be compared with available groundwater data from the date of landfill closure, to determine if any changes since the closure have occurred. This 'benchmark' data will be reviewed with D.E.P. prior to any quarry activity and provided to the City for review

*clarify sampling + benchmark analysis - same as above*

- Upon commencement of the blasting operations, Dragon will provide water level monitoring of the landfill monitoring wells on the same schedule that the landfill cap monitoring is performed. Additional ground water sampling and analysis will be conducted at high water period (April), low water period (July or August) and at the end of the season.
- Ground water monitoring data will be summarized in tables and provided to the City and to MEDEP on an annual basis.
- In accordance with D.E.P. quarry standards that specify a minimum setback of excavation from 100 to 1,000 feet from a well, Dragon's quarry is at least double that distance with no drinking water well identified within 2,000 feet. There has been no data provided that suggests that there is a cause of concern for well water quality at distances in excess of 2,000 feet, and there will be no groundwater testing at those distances.

*Will we meet groundwater standard of Site Plan Ordinance?*

## Attachment 13

### Quarry Reclamation

- The Ocean Avenue Quarry is subject to reclamation requirements that are consistent with 38 MRSA 490-Z Performance Standards for Quarries. Reclamation, as defined under Article 8A, means "the rehabilitation of the area of land affected by mining, including, but not limited to, stabilization of slopes and creation of safety benches, the planting of forests, the seeding of grasses..." The objective of the reclamation standard is to minimize the impact posed by an affected area.
- Dragon will be required to restore the affected lands associated with the Ocean Ave operation to a condition that minimizes the safety risks posed by the site, is protective of future impacts to the environment (from fugitive dusts, soil and sediment run-off, etc) and is consistent with the intended future use of the site (residential, open-space, commercial or industrial use).
- While a detailed reclamation plan will be dependent on the final configuration of the quarry, Dragon has an obligation to stabilize rock slopes to prevent rockfalls and to stabilize overburden in accordance with the best management practices for erosion and sedimentation control. In meeting the performance standard for quarry reclamation, Dragon will be required to address the following at the Ocean Avenue Quarry:
  - Quarry faces, will be left in a condition that minimizes the possibility of rock falls. Loose rock may be controlled by the use of blasting or scaling. Highwalls will be reduced using safety benches to reduce face heights to a maximum of 30 feet.
  - Exposed overburden or soil will be stabilized to minimize erosion and promote sedimentation control. Slopes will be graded to minimize run-off and exposed soil will be mulched or otherwise covered until a vegetative cover is established.
  - A vegetative cover will be established by seeding affected land except for quarry walls and flooded areas. Vegetative cover used in reclamation may consist of grasses, legumes, herbaceous or woody plants, shrubs, trees or a mixture of these.
  - Unusable structures will be removed and unusable access roads, haul roads and other support roads will be reclaimed.
  - Affected lands will be reclaimed within 2 years after final operational grading has been reached.

## Attachment 14

### Protocol for Complaints, Damage Claims & Resolution

- On an annual basis, Dragon shall provide neighbors of the Ocean Avenue quarry a list of contact names, addresses and telephone numbers of Dragon personnel to be notified in the event of a complaint regarding the quarry operation or a claim for damages. This list will include the supervisor of the quarry, Dragon's environmental manager and Dragon's divisional vice-president. This list will be updated annually and provided to the City and neighbors at the time of the annual review meeting prior to a new season of blasting.
- Dragon shall contact any individual filing a complaint about its operations within two business days to discuss the nature of the complaint and an appropriate manner in which to address the specific issue, and depending on the nature and magnitude of the complaint, determine if it is necessary to schedule a meeting to further discuss to complaint. If necessary, such a meeting may include representatives from M.D.E.P., City of Portland, drilling and blasting contractor, project engineering firms, and insurance and legal representatives of any party.
- Dragon shall investigate all complaints about its operations and respond, in writing, within 10 days of the registering of the complaint. While the written response may not resolve the complaint, it shall include the history of the complaint, status or work done on the complaint to date and any follow-up work planned, with a copy being provided to the City upon request and/or as part of Dragon's annual report to the City.
- Dragon shall acknowledge receipt of any written claim for damages as a result of its operations within 2 business days of receipt of the written claim. Claims shall include a written estimate of the repair costs by an independent party whenever possible. Claims will be much easier to investigate if the claimant has had a 'pre-blast survey' done of their property as described in Attachment 7.
- Dragon shall inspect the alleged damage with the property owner within 5 business days of receipt of the written claim, assuming the claimant provides Dragon with reasonable access to area of alleged damage. In the event of broken windows that are clearly the result of blasting, Dragon shall arrange for glass replacement at the earliest possible schedule of a glass company. Dragon shall respond within 10 business days of this inspection depending on the amount of the claim as follows:

For all property damage claims of \$2,500 or less, Dragon will handle the claim in a 'self-insured' manner. Where clear evidence is present to show that the property damage is the result of Dragon activities, full restitution shall be paid based on a written estimate of repair costs by an independent third party or for such amount as can be agreed to by Dragon and the claimant. Dragon shall have the option to make the repairs itself if it believes the written estimate of repair costs to be too high. Dragon will pay the restitution to claimant within 10 business days of the inspection or Dragon will do the

repair work itself within 45 days of the inspection, assuming the claimant cooperates by providing reasonable access to the damaged property. Dragon will provide the claimant a written reason why no restitution is offered within 10 business days of the inspection if it does not believe that it is responsible for the damage. The resolution of such property claims will not represent an admission of fault or liability by Dragon, and will not prevent Dragon from defending future claims that may arise. The claimant will reserve all rights against Dragon if no agreement is reached. The acceptance of any such restitution will not preclude a claimant from pursuing future claims based on future activities.

For all property damage claims in excess of this \$2,500 'self-insured' level, Dragon shall promptly arrange for the appropriate insurance representatives to appraise the damage and discuss the claim with the claimant. Dragon shall instruct the insurance carrier to make a determination on the claim as soon as possible. If through this investigation, Dragon is clearly found to be responsible for the property damage, Dragon shall instruct the insurance carrier to offer prompt settlement of the claim. If through this investigation, there are issues on Dragon's responsibility for the damage, these issues shall be promptly furnished to the claimant in writing, so that the claimant can make an informed decision on pursuing the claim. It is Dragon's intent to have such review and investigation complete within 10 business days of receipt of the written claim, with an initial written decision on the claim provided to the claimant within 10 business days after the inspection by the insurance agents.

- Dragon shall provide the City, on an annual basis, a summary report of all complaints, damage claims and resolutions from the previous year of quarry operation. Dragon shall maintain all records regarding complaints for a minimum of 5 years, with the records available to the City upon request.

DRAFT: 9-5-01  
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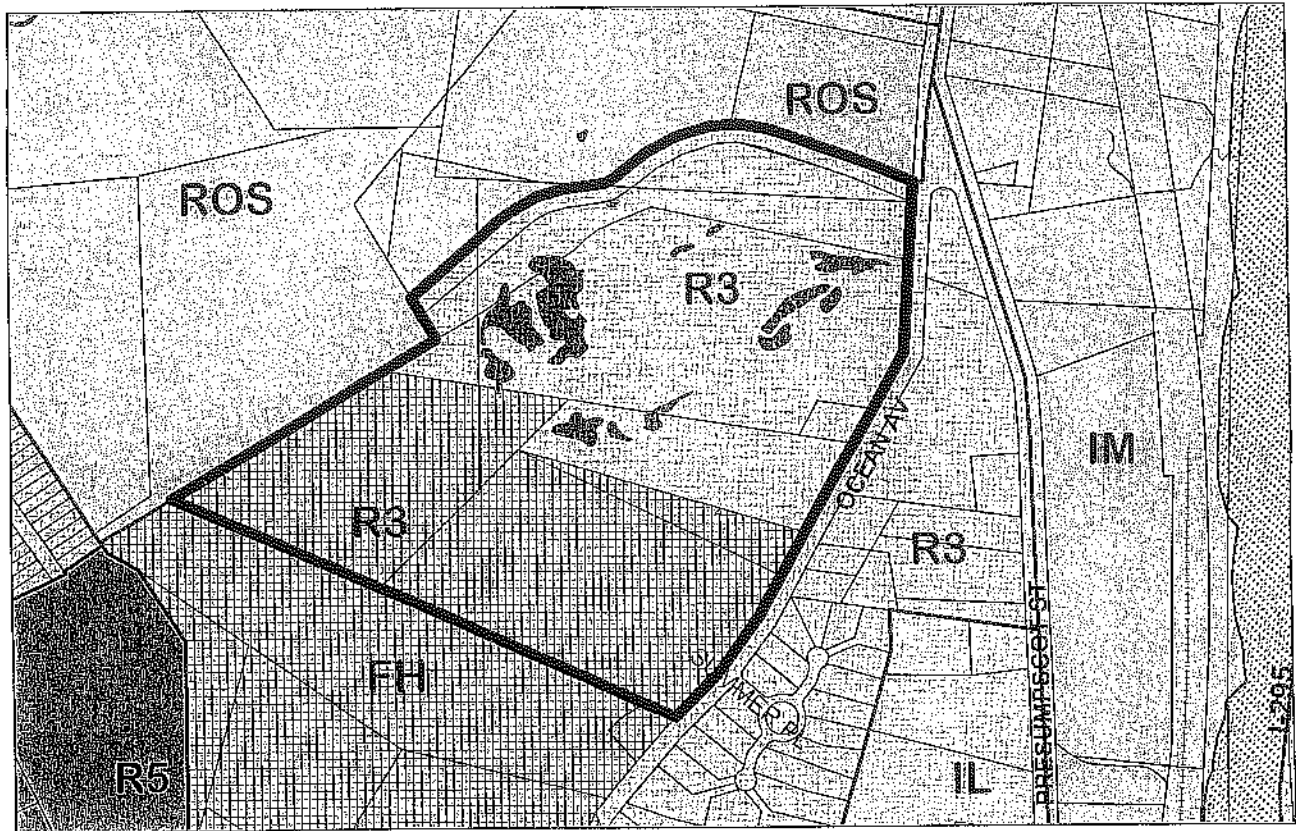
## Attachment 15

### Annual Quarry Report to the City of Portland

- On or before February 1 of each year, Dragon shall provide an annual summary report to the City of Portland regarding the operation of the Ocean Avenue quarry during the previous year, with all supporting data to this summary available upon request. This report shall include, but not be limited to the following:
  - a) Neighborhood pre-blast survey summary
  - b) Ocean Avenue landfill monitoring summary
  - c) Quarry blast event data - including blast monitoring summary
  - d) Complaints, Claims and Resolution summary
  - e) Tentative blast event schedule for the upcoming year
- Dragon shall, upon request, provide a copy of this annual quarry report to Ocean Avenue neighbors.
- On or before March 15th of each year, prior to blasting activities in the new year, and at the City's convenience, Dragon shall schedule an annual 'neighborhood meeting', to allow for public discussion of the previous year's quarry activities. Dragon representatives, including individuals providing subcontracted blasting and engineering services, will be in attendance to provide a review of the previous year and discuss plans for the upcoming quarry season.
- Dragon shall provide the City of Portland such an annual summary report until termination of quarry activities at the Ocean Avenue site, with copies of this annual report available to neighbors upon request. All supporting data for this annual summary report shall be available for review upon request and shall be maintained for a minimum of 5 years upon termination of quarry activities.
- Upon request, at any time during the year, Dragon shall provide the City a summary of available quarry data year-to-date, with the supporting detail available for review upon request.

PORTLAND PLANNING BOARD  
PUBLIC NOTICE

Notice is hereby given that the Portland Planning Board will hold a public hearing on Tuesday evening, October 23, 2001 at 6:00 p.m. in room 209, 2<sup>nd</sup> Floor, City Hall, Portland, Maine to consider a proposal by Dragon Products for a contract zone for property located at 960 Ocean Avenue. The applicant proposes a contract zone in order to allow the blasting, crushing, and processing of rock in the production of concrete. The boundaries of the contract zone are shown below. The parcel is approximately 38 acres and zoned R-3 Residential.



PROPOSED DRAGON CONTRACT ZONE

 Proposed Contract Zone

200 0 200 Feet



Map produced by the City of Portland's Department of Planning & Urban Development & the GIS Workgroup October 2001

Further information on this development, including the contract language, can be obtained at the Planning Department Office, City Hall, 4th Floor, or by calling 874-8720.

Jaimey Caron, Chair  
Portland Planning Board

draft: 9-28-01

**DRAGON PRODUCTS COMPANY, INC. AGREEMENT**

This document is an Agreement made by **DRAGON PRODUCTS COMPANY, INC.**, a corporation with a business address of 38 Preble Street, P.O. Box 1521, Portland, Maine 04104 ("DRAGON").

WHEREAS, DRAGON requested a rezoning of its property located at Ocean Avenue, in the **CITY of PORTLAND**, a Maine municipality located in Cumberland County and State of Maine ("CITY" or "Portland") in order to permit mining operations on the site of its legally existing nonconforming concrete plant; and

WHEREAS, DRAGON'S property is shown on Portland Assessor's Parcels: Map 416-A, Block A, Lot 2; Map 417, Block A, Lots 4, 5, 10 and 11; and Map 418, Block A, Lots 1, 3, 4, 5, 6, 9 and 10 ("Property"); and

WHEREAS, the Portland Planning Board, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberations, recommended the rezoning of the Property, subject, however, to certain conditions; and

WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY'S comprehensive plan and would not unreasonably interfere with the existing and permitted uses within the underlying R-3 zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the following plans and documents are attached to this Agreement and incorporated into this Agreement by reference:

- Attachment 1: City Zoning Map change (~~to be prepared by City~~)
- Attachment 2: Quarry Plan View (F-1) dated June 5, 2000
- Attachment 3: Plan View of Proposed Berm (F-2) dated June 5, 2000
- Attachment 4: Ocean Avenue Longitudinal and Cross Sections (F-3) dated June 5, 2000
- Attachment 5: Vibration Standards
- Attachment 6: Blasting Plan
- Attachment 7: Pre-Blast Survey
- Attachment 8: Test Blast Program
- Attachment 9: Blast Event Protocol
- Attachment 10. Blast Monitoring
- Attachment 11. City Landfill Monitoring
- Attachment 12. Groundwater Monitoring
- Attachment 13. Quarry Reclamation
- Attachment 14. Protocol for Complaints, Damage Claims, and Restitution
- Attachment 15. Annual Quarry Report to City

NOW, THEREFORE, in consideration of the zone change made by the CITY, DRAGON hereby agrees as follows:

1. Site Development: The Property shall be developed substantially in accordance with the site plans and elevations shown on Attachments 2-4. DRAGON shall:
  - a. Remove the existing batch plant and silos, truck fuel depot, conveyor, concrete retaining wall and temporary ditch, and rock crushing facility.
  - b. Relocate its batch plant and related operations no closer than 350 feet to Ocean Avenue, in the "approximate limit of operation area" shown on Attachment 2.
  - c. Locate the new rock crusher facility no closer than 750 feet to Ocean Avenue ~~in the operations area~~ as shown on Attachment 2, and enclose any rock crushing operations within a sound insulated building.
  - d. A new earthen berm, fence, paved entrance, drainage ditch, and climbing lane will be constructed along the west side of Ocean Avenue ~~as shown on Attachments 2-4~~. All Site Plan elements, including but not limited to the final berm design, landscape planting, and scheduling, etc. will be determined by the Planning Board in its site plan review, ~~after consultation with the City Arberist.~~
  - e. DRAGON shall relocate the entrance driveway to the concrete plant, and shall create a slip lane for slow-moving traffic along Ocean Avenue as shown on Attachments 2 and 3. To the extent that any of the new roadway or drainage improvements are located on land of DRAGON, it will deed that portion of its land to the CITY.



f. Develop a stormwater management plan for the entire site, according to MeDEP performance standards, including all improvements along Ocean Avenue and within the operations area according to MeDEP performance standards.

Notwithstanding the foregoing paragraphs a through f, Provided, however, that all such development on the Property shall be subject to full Site Plan review and approval by the Planning Board, which may approve modifications to these plans as part of the review process. In addition, all development must meet all federal and state review requirements. DRAGON shall post with the CITY a performance guarantee in the full amount of improvements to be made to the site, including but not limited to the development of the operations area.

2. Authorized Uses: DRAGON shall only be authorized to establish and maintain the following uses or any combination of the uses on the Property, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth in this Agreement and established by State and Federal law:

a. Mining of stone (through various methods, including blasting) in the "quarry expansion area" shown on Attachment 2, ~~including blasting,~~ and crushing of stone for use in the on-site manufacture of concrete ~~on the site only.~~ No crushed stone shall be provided or sold for off-site concrete manufacturing.

b. Concrete manufacture and processing.

c. Outdoor storage of materials, including aggregate (rock, sand, etc) piles utilized in the concrete manufacturing, material manufactured on the site (including concrete blocks produced as an incidental part of its operations), and related machinery and equipment.

e. All concrete trucks shall be hosed down before exiting the operations area on the Property to reduce the amount of dust and debris tracked onto Ocean Avenue.

f. Vehicle repair and storage and office operations within the existing Dragon Products Company garage facilities (3 bays) on Ocean Avenue shown on Attachment 2.

3. Timing of Uses on Property: Prior to the commencement of any blasting (including test blasts), mining or rock crushing, Dragon shall obtain from the City a Certificate of Occupancy, verifying that all site alterations described in Section 1 are completed and as otherwise approved by the Planning Board within the time frame in paragraph 4. In other words, no blasting, mining or rock crushing shall occur for, at minimum, a two year period or completion of all phased site work, whichever occurs earlier have been completed. DRAGON shall discontinue use of its existing batch plant within 30 days of its new batch plant being fully operational, and shall remove its existing batch plant from the Property within 180 days of its use being discontinued.

4. Time Limit for Certain Improvements: Dragon shall apply for Site Plan Approval for the site changes described in Section 1 (a, b, d-f) (all site improvements except the rock crusher) within one year of the rezoning of the Property by the City Council. Dragon shall complete the improvements along Ocean Avenue within one year of final Planning Board approval of the site plan, and shall complete all approved site improvements within two years of final Planning Board approval of the site plan, or this contract shall automatically terminate and the Property shall automatically revert to the R-3 or any successor zone classification.

5. Natural Buffer Areas: The existing trees and other natural vegetation in the "existing wooded buffer strip" on the south side of the site and the "existing vegetation" on the north side of the site shown on Attachment 2 shall remain in their natural state. These areas, or any portions of them, may not be separately conveyed apart from the Property as a whole, while any blasting, mining, or concrete manufacturing activities are being conducted on the Property.

6. Limits on Blasting: DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. In no event shall more than four (4) individual blasts per month be permitted. All blasting and rock crushing on the site shall occur on Monday through Friday between the hours of 9:00 a.m. and 4:00 p.m. and between April 1<sup>st</sup> and November 15<sup>th</sup> of each year. No blasting or warning signals for blasting shall be done between 7:00 a.m. and 9:00 a.m. or between 2:00 p.m. and 4:00 p.m. on any day when the City of Portland public schools are in session.

**Vibration standards shall meet the limits described in Attachment 5, Maximum Allowable Peak Particle Velocity for Ground Vibration.**

7. Blasting Operations: All blasting shall also be conducted in accordance with the Blasting Plan (Attachment 6), Pre-Blast Survey Protocol (Attachment 7), Test Blast Program (Attachment 8), Blast Event Protocol (Attachment 9) and Blast Event Monitoring (Attachment 10).

DRAGON also agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including those set forth in 38 M.R.S.A. §§490-W to 490EE as it may be amended, except that where municipal standards adopted by the CITY which are not otherwise described in this Agreement are more restrictive, then the CITY standards shall apply. The McDEP standards shall include, but not be limited to:

- a. Blasting standards described in §490-Z(14), including airblast standards in subsection (B) and (C), preblast surveys as described in subsection (F), sound standards described in subsection (H), vibration standards described in subsections (I) - (K), and blasting records as described in subsection (L), including records of peak particle velocity and decibels for each blast.
- b. Dust standards described §490-Z (12)
- c. Reclamation standards described in §490-Z (13)

8. Adjacent City Landfill: DRAGON will monitor the adjacent City landfill as described in Attachment 11. Dragon hereby indemnifies the CITY for any damage done by

Dragon's operations to the former landfill on adjacent land of the CITY on land to the north of the Dragon site.

9. Groundwater Monitoring: DRAGON will do groundwater monitoring as described in Attachment 12.

10. Parcels east of Ocean Avenue: As long as it operates its existing concrete batch plant on Ocean Avenue, DRAGON shall maintain ownership of the parcels east of Ocean Avenue across from the Property, more particularly described as Tax Map 418-A, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

11. Reclamation of Site: Reclamation of the Property into a vegetated, useable condition shall be completed substantially in accordance with the reclamation plan described in Attachment 13 within 2 years of completion of the mining on the Property; provided, however, that such plan shall be subject to full review and approval by the Planning Board before being implemented. If the owner of the Property fails to implement proper reclamation activities, then the CITY may do the work after 30 days notice to the owner, and the reasonable costs and expenses of the work by the CITY shall be a lien on the Property enforceable in the same manner as a lien for real estate taxes.

12. City Zoning Standards: DRAGON shall meet all IL zoning standards contained in sections 14-234, 14-235, and 14-236 of the Portland City Code, except as follows:

a. No new fence shall be required pursuant to 14-235(6) except as shown on Attachments 2-4 and as may be required by the Planning Board during final Site Plan review.

b. Outside storage of sand and stone shall not be required to meet the standards of §14-235(10).

c. Vibration standards in §14-236(3) shall not apply to blasting, and IM vibration standards found in §14-252(3) shall apply to all other operations.

d. Noise standards in §14-236(1) shall not apply to blasting.

e. The existing concrete batch plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is removed from the Property, but the new concrete production building shall comply with the IL noise standards at §14-236(1) when measured at property lines of the Property.

13. IL Zoning Standards: Except as expressly modified in this Agreement, the use and occupancy of the Property shall be governed by and comply with the IL zoning provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

14. Liability and Claims: Dragon shall be responsible for all damages determined to be caused by its mining and concrete manufacturing operations. Dragon will follow the

Protocol for Complaints, Damage Claims, and Restitution described on Attachment 14. Copies of all written complaints and/or claims will be provided by DRAGON to the City upon a written request from the City at any time.

15. Annual Review by CITY: DRAGON shall provide the CITY with its written records of its pre-blast survey work, monitoring work, blasting activities and complaints and claims received as further described in Attachment 15 by February 1<sup>st</sup> following any year in which blasting occurred or upon written request from the City. The CITY Planning Department will review these records and ~~will~~ may schedule a meeting with DRAGON and residents within 2,000 feet of the quarry on or before the following March 15th, which may be held by the Planning Board at the CITY's discretion. The purpose of the meeting will be to discuss any issues that may have arisen in the previous year and the best way to resolve them for the upcoming year. If the CITY is not satisfied with DRAGON's response to any issues, then it may initiate the default provisions further described in Section 20.

16. DRAGON's Successors: If DRAGON sells or transfers the Property to any new owner in the future which wants to continue the blasting, mining and concrete manufacturing operations, then any prospective new owner must receive written approval from the City of Portland Planning Board as to that owner's technical and financial abilities to comply with the terms of this Agreement. The Planning Board must be satisfied that the new owner have a demonstrated history of mining operations and have comported with all applicable laws and regulations. ~~and 4~~ The new owner must sign a copy of this Agreement agreeing to comply with all of its terms.

17. Record Notice: DRAGON agrees to record this Agreement in the Cumberland County Registry of Deeds, and to include a reference to it in any deed conveying any of the Property.

18. Enforceability: The restrictions, provisions and conditions in this Agreement are an essential part of the rezoning, shall run with and bind the Property, shall bind DRAGON, its successors and assigns, as owner of the Property and any party in possession or occupancy of the Property or any portion of it, and shall inure to the benefit of and be enforceable by the CITY, by and through its duly authorized representatives.

19. Severability: If any of the restrictions, provisions, conditions, or portions of this Agreement are determined to be invalid or unconstitutional for any reason by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portion of this Agreement.

20. Default by Dragon: In the event that the CITY claims that DRAGON or any successor has failed to utilize the Property in accordance with this Agreement, then it may give DRAGON written notice of the default claimed by the CITY. The City Planning Staff may seek a hearing on these issues before the Planning Board at any time. If DRAGON does not correct the defaults in a timely manner to the CITY's satisfaction,

then the CITY may institute a judicial enforcement action for the breach of this Agreement. If it is determined in such judicial enforcement action that DRAGON has breached this Agreement, and DRAGON fails to comply with the Agreement in a timely manner after such judicial determination, then the CITY Planning Staff may recommend to the City Council that this Agreement be terminated, requiring a cessation of the blasting and mining uses permitted under the terms of this Agreement; provided that the termination of the Agreement will not require cessation of the concrete manufacturing and processing and other uses described in Section 2 excluding paragraph (c) as noted above. In addition, if the CITY prevails in any court proceeding to enforce this Agreement, DRAGON shall pay all CITY attorney fees and costs incurred in such enforcement.

21. Future Peer Review: If the CITY does not understand the material given to the CITY according to the terms of this Agreement, then it may request a further explanation or clarification from DRAGON at any time. After reviewing the additional information, if the CITY still has a reasonable need to hire engineers or other blasting professionals to help it evaluate the material, then DRAGON agrees to pay the reasonable costs of such peer review; ~~provided, however, that DRAGON must reasonably approve the scope and expected cost of such peer review work in writing before any work is done for which DRAGON is financially responsible.~~

22. Execution: This Contract shall be executed upon the Portland City Council approval of the rezoning of the Property.

WITNESS: DRAGON PRODUCTS COMPANY, INC.

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss. Date: \_\_\_\_\_, 2001

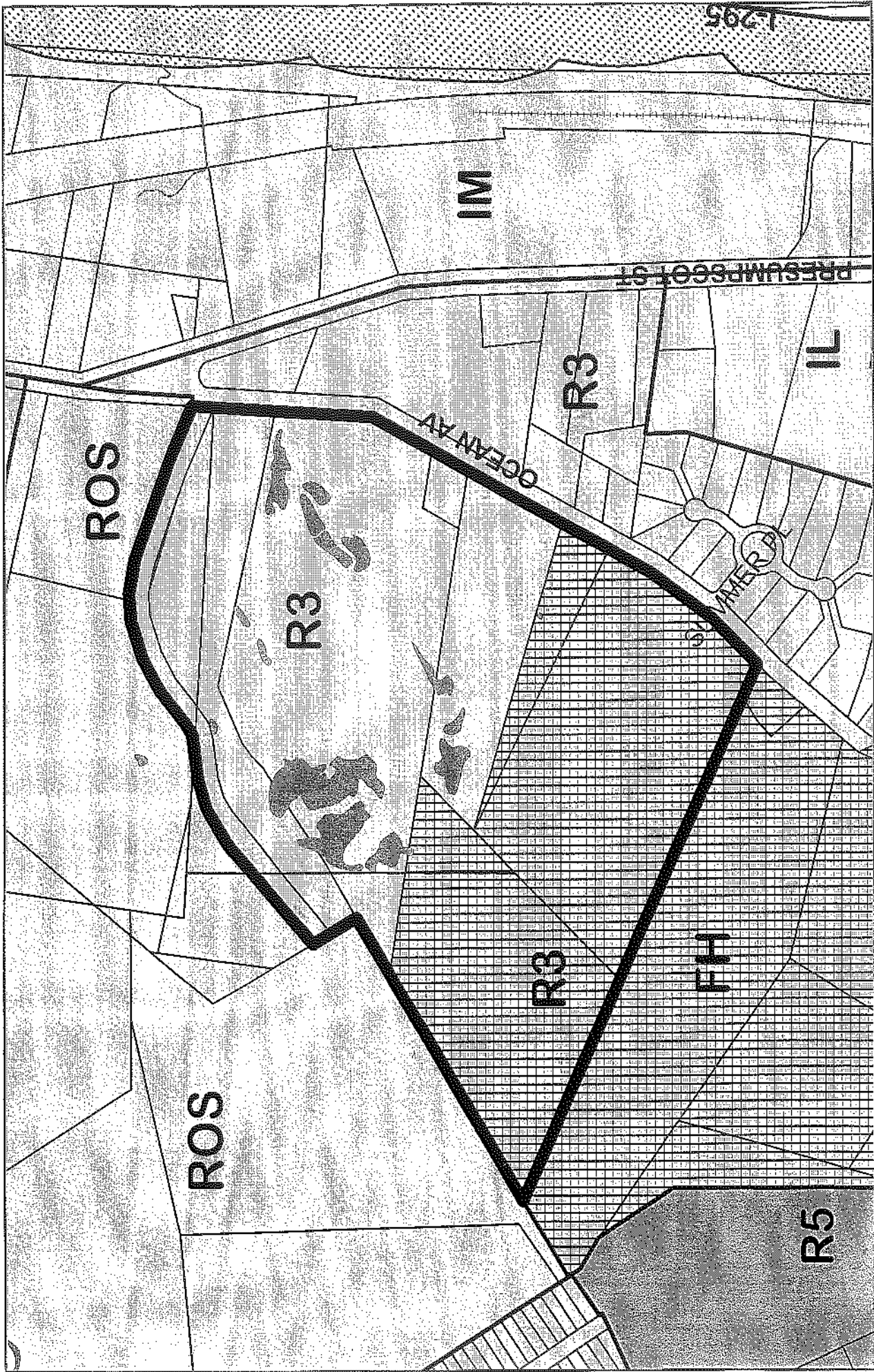
\_\_\_\_\_, as \_\_\_\_\_ of Dragon Products Company, Inc., personally appeared before me and acknowledged that the signature on this document was his free act and deed acting on behalf of Dragon Products Company, Inc.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

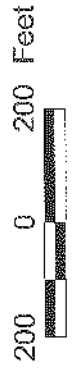
Print Name: \_\_\_\_\_

Draft: September 28, 2001  
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# PROPOSED DRAGON CONTRACT ZONE

## Proposed Contract Zone



*Cheryl A. Leeman*  
*Mayor*



*City of Portland*  
*Office of the Mayor and Council*  
*Portland, Maine*

*Councilors*

*James F. Cloutier*  
*Philip John Dawson*  
*Karen A. Geraghty*  
*Jay M. Hibbard*  
*Tom Hume*  
*Cheryl A. Leeman*  
*Nicholas M. Maradones, Jr.*  
*Peter E. O'Donnell*  
*Nathan H. Smith*

March 26, 2001

Dear Neighbor;

You are invited to attend a neighborhood meeting on Thursday, April 12, 2001 at 7:30pm at the Presumpscot School to hear an update from the City's geotechnical engineer on the Dragon Products proposal to allow the blasting of rock at the facility on Ocean Avenue.

Mark Peterson of Peterson-Rabasca Geotechnical Engineers has been hired by the City of Portland to provide technical assistance during the review of this project. Mr. Peterson will update the neighborhood on his work to date. Dragon Products representatives will also be available at the meeting to discuss the progress of their engineers' work and to answer questions on the proposal.

I look forward to seeing you there.

Sincerely

*Cheryl Leeman*

Cheryl Leeman  
Mayor



*Cheryl A. Leeman*  
Mayor



*City of Portland*  
*Office of the Mayor and Council*  
*Portland, Maine*

*Councilors*

*James F. Cloutier*  
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I look forward to seeing you there.

Sincerely

*Cheryl Leeman*

Cheryl Leeman  
Mayor

**CITY OF PORTLAND, MAINE  
MEMORANDUM**

**TO:** Chair Caron and Members of the Portland Planning Board

**FROM:** Sarah Hopkins, Development Review Manager

**DATE:** September 11, 2001

**RE:** Dragon Products Contract Zone

Dragon Products has requested a final workshop with the Planning Board to provide an update on the research done to date regarding the proposal to blast ledge at the quarry on Ocean Avenue. Since the previous workshop on this contract zone proposal, the applicant has made progress toward answering many of the questions raised by the Planning Board and the City's geotechnical engineer, Mark Peterson.

At the last workshop in April, Mr. Peterson outlined a number of questions and issues that should be addressed by Dragon. These issues included allowable peak particle velocity, the number of permitted blasts per year, pre-blast surveys, a blast plan, and others. The applicant has been working with Mr. Peterson and its own engineers to resolve these issues and has submitted a revised contract for the Planning Board to review.

The most notable amendment to the draft contract is the reduction of the allowable peak particle velocity. Dragon has lowered the p.p.v. to .75. This standard is lower than the MEDEP performance standard of 1.25/sec within 300 feet from blast area and 1.0 between 301 and 5000ft from the blast site.

The applicant has also added more detail and specifics to the test blast program and blast event protocol.

Included as Attachment 1 is the updated contract with attachments

Attachments

1. Draft Contract with Attachments
2. Correspondence from Mark Peterson dated 4/25/01
3. Geologic Assessment by Jacques Whitford



CHRISTOPHER NEAGLE  
PARTNER  
cneagle@verrilldana.com  
Direct: 207-253-4506

ONE PORTLAND SQUARE  
PORTLAND, MAINE 04112-0586  
207-774-4000 • FAX 207-774-7499

September 5, 2001

Sarah Hopkins  
Planning Office  
Portland City Hall  
389 Congress Street  
Portland, ME 04101


Re: Proposed Dragon Industrial Zone

Dear Sarah:

I have enclosed a new draft of the proposed Agreement between the City of Portland and Dragon Products Company, Inc., incorporating the issues we discussed with staff last month and Mark Peterson's subsequent comments. All attachments are also included, although the plans shown as attachments 2-4 have not changed and the colored versions that everyone should already have are easier to review.

I hope that the City planning staff will be able to advise the Planning Board that Dragon has made the major concessions requested by the staff and neighbors, and has addressed all of the issues that have come up since we were last at a workshop this spring. We hope that the Planning Board will also support this proposal, and will be able to schedule a public hearing to make a final recommendation to the City Council in early October.

Thanks for all of your help on this project. Call me with any questions.

Sincerely,  
  
Chris Neagle

CSN/csn  
Enclosures

cc: David S. Grinnell, Dragon Products Company  
Mayor Cheryl Leeman  
Penny Littel, Corporation Counsel's Office  
Mark S. Peterson, P.E.  
Twelve Portland Neighbors  
John S. Rudd, Esq.

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draft: 9-5-01

## DRAGON PRODUCTS COMPANY, INC. AGREEMENT

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WHEREAS, DRAGON'S property is shown on Portland Assessor's Parcels: Map 416-A, Block A, Lot 2; Map 417, Block A, Lots 4, 5, 10 and 11; and Map 418, Block A, Lots 1, 3, 4, 5, 6, 9 and 10 ("Property"); and

WHEREAS, the Portland Planning Board, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberations, recommended the rezoning of the Property, subject, however, to certain conditions; and

WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY'S comprehensive land use plan and consistent with the existing and permitted uses within the original R-3 zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the following plans and documents are attached to this Agreement and incorporated into this Agreement by reference:

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Attachment 8: Test Blast Program

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Attachment 10. Blast Monitoring

Attachment 11. City Landfill Monitoring

Attachment 12. Groundwater Monitoring

Attachment 13. Quarry Reclamation

Attachment 14. Protocol for Complaints, Damage Claims, and Restitution

Attachment 15. Annual Quarry Report to City

NOW, THEREFORE, in consideration of the zone change made by the CITY, DRAGON hereby agrees as follows:

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a. Remove the existing batch plant and silos, truck fuel depot, conveyor, concrete retaining wall and temporary ditch, and rock crushing facility.

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d. A new earthen berm, fence, paved entrance, drainage ditch, and climbing lane will be constructed along the west side of Ocean Avenue as shown on Attachments 2-4. The final berm design, landscape planting and schedule will be determined by the Planning Board in its site plan review, after consultation with the City Arborist.

e. DRAGON shall relocate the entrance driveway to the concrete plant, and shall create a slip lane for slow-moving traffic along Ocean Avenue as shown on Attachments 2 and 3. To the extent that any of the new roadway or drainage improvements are located on land of DRAGON, it will deed that portion of its land to the CITY.

f. Develop a stormwater management plan for the entire site, including all improvements along Ocean Avenue and within the operations area according to MeDEP performance standards.

Provided, however, that such development shall be subject to full Site Plan review and approval by the Planning Board, which may approve modifications to these plans as part of the review process.

2. Authorized Uses: DRAGON shall only be authorized to establish and maintain the following uses or any combination of the uses on the Property, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth in this Agreement and established by State and Federal law:

a. Mining of stone in the "quarry expansion area" shown on Attachment 2, including blasting, and crushing of stone for use in manufacture of concrete on the site only.

b. Concrete manufacture and processing.

c. Outdoor storage of materials, including aggregate (rock, sand, etc) piles utilized in the concrete manufacturing, material manufactured on the site (including concrete blocks produced as an incidental part of its operations), and related machinery and equipment.

e. All concrete trucks shall be hosed down before exiting the operations area on the Property to reduce the amount of dust and debris tracked onto Ocean Avenue.

f. Vehicle repair and storage and office operations within the existing Dragon Products Company garage facilities (3 bays) on Ocean Avenue shown on Attachment 2.

3. Timing of Uses on Property: Prior to the commencement of any blasting, mining or rock crushing, Dragon shall obtain from the City a Certificate of Occupancy, verifying that all site alterations described in Section 1 and as otherwise approved by the Planning Board have been completed. DRAGON shall discontinue use of its existing batch plant within 30 days of its new batch plant being fully operational, and shall remove its existing batch plant from the Property within 180 days of its use being discontinued.

4. Time Limit for Certain Improvements: Dragon shall apply for Site Plan Approval for the site changes described in Section 1 (a, b, d-f) (all site improvements except the rock crusher) within one year of the rezoning of the Property by the City Council. Dragon shall complete the improvements along Ocean Avenue within one year of final Planning Board approval of the site plan, and shall complete all approved site improvements within two years of final Planning Board approval of the site plan, or this contract shall automatically terminate and the Property shall automatically revert to the R-3 or any successor zone classification.

5. Natural Buffer Areas: The existing trees and other natural vegetation in the "existing wooded buffer strip" on the south side of the site and the "existing vegetation" on the north side of the site shown on Attachment 2 shall remain in their natural state. These areas, or any portions of them, may not be separately conveyed apart from the Property as a whole, while any blasting, mining, concrete manufacturing, or other uses not consistent with the underlying R-3 or successor zone are being conducted on the Property.

6. Limits on Blasting: DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. In no event shall more than four (4) individual blasts per month be permitted. All blasting and rock crushing on the site shall occur on Monday through Friday between the hours of 9:00 a.m. and 4:00 p.m. and between April 1<sup>st</sup> and November 15<sup>th</sup> of each year. No blasting or warning signals for blasting shall be done between 7:00 a.m. and 9:00 a.m. or between 2:00 p.m. and 4:00 p.m. on any day when the City of Portland public schools are in session.

**Vibration standards shall meet the limits described in Attachment 5, Maximum Allowable Peak Particle Velocity for Ground Vibration.**

7. Blasting Operations: All blasting shall also be conducted in accordance with the Pre-Blast Survey Protocol (Attachment 6), Blasting Plan (Attachment 7), Test Blast Program (Attachment 8), Blast Event Protocol (Attachment 9) and Blast Event Monitoring (Attachment 10).

DRAGON also agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including those set forth in 38 M.R.S.A. §§490-W to 490EE as it may be amended, except that where municipal standards adopted by the CITY which are not otherwise described in this Agreement are more restrictive, then the CITY standards shall apply. The MeDEP standards shall include, but not be limited to:

a. Blasting standards described in §490-Z(14), including airblast standards in subsection (B) and (C), preblast surveys as described in subsection (F), sound standards described in subsection (H), vibration standards described in subsections (I) - (K), and blasting records as described in subsection (L), including records of peak particle velocity and decibels for each blast.



- b. Dust standards described §490-Z (12)
- c. Reclamation standards described in §490-Z (13)

8. Adjacent City Landfill: DRAGON will monitor the adjacent City landfill as described in Attachment 11. Dragon hereby indemnifies the CITY for any damage done by Dragon's operations to the former landfill on adjacent land of the CITY on land to the north of the Dragon site.

9. Groundwater Monitoring: DRAGON will do groundwater monitoring as described in Attachment 12.

10. Parcels east of Ocean Avenue: As long as it operates its existing concrete batch plant on Ocean Avenue, DRAGON shall maintain ownership of the parcels east of Ocean Avenue across from the Property, more particularly described as Tax Map 418-A, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

11. Reclamation of Site: Reclamation of the Property into a vegetated, useable condition shall be completed substantially in accordance with the reclamation plan described in Attachment 13 within 2 years of completion of the mining on the Property; provided, however, that such plan shall be subject to full review and approval by the Planning Board before being implemented.

12. City Zoning Standards: DRAGON shall meet all IL zoning standards contained in sections 14-234, 14-235, and 14-236 of the Portland City Code, except as follows:

- a. No new fence shall be required pursuant to 14-235(6) except as shown on Attachments 2-4 and as may be required by the Planning Board during final Site Plan review.
- b. Outside storage of sand and stone shall not be required to meet the standards of §14-235(10).

c. Vibration standards in §14-236(3) shall not apply to blasting, and IL vibration standards found in §14-252(3) shall apply to all other operations.

d. Noise standards in §14-236(1) shall not apply to blasting.

e. The existing concrete batch plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is removed from the Property, but the new concrete production building shall comply with §14-236(1) when measured at property lines of the Property.

13. IL Zoning Standards: Except as expressly modified in this Agreement, the use and occupancy of the Property shall be governed by and comply with the IL zoning provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

14. Liability and Claims: Dragon shall be responsible for all damages determined to be caused by its mining and concrete manufacturing operations. Dragon will follow the Protocol for Complaints, Damage Claims, and Restitution described on Attachment 14. Copies of all written complaints and/or claims will be provided by DRAGON to the City upon a written request from the City at any time.

15. Annual Review by CITY: DRAGON shall provide the CITY with its written records of its pre-blast survey work, monitoring work, blasting activities and complaints and claims received as further described in Attachment 15 by February 1<sup>st</sup> following any year in which blasting occurred or upon written request from the City. The CITY Planning Department will review these records and will schedule a meeting with DRAGON and residents within 2,000 feet of the quarry on or before the following March 15<sup>th</sup>, which may be held by the Planning Board at the CITY's discretion. The purpose of the meeting will be to discuss any issues that may have arisen in the previous year and the best way to resolve them for the upcoming year. If the CITY is not satisfied with DRAGON's response to any issues, then it may initiate the default provisions

further described in Section 20.

16. DRAGON's Successors: If DRAGON sells or transfers the Property to any new owner in the future which wants to continue the blasting, mining and concrete manufacturing operations, then any prospective new owner must receive written approval from the City of Portland Planning Department as to that owner's technical and financial abilities to comply with the terms of this Agreement, and the new owner must sign a copy of this Agreement agreeing to comply with all of its terms.

17. Record Notice: DRAGON agrees to record this Agreement in the Cumberland County Registry of Deeds, and to include a reference to it in any deed conveying any of the Property.

18. Enforceability: The restrictions, provisions and conditions in this Agreement are an essential part of the rezoning, shall run with and bind the Property, shall bind DRAGON, its successors and assigns, as owner of the Property and any party in possession or occupancy of the Property or any portion of it, and shall inure to the benefit of and be enforceable by the CITY, by and through its duly authorized representatives.

19. Severability: If any of the restrictions, provisions, conditions, or portions of this Agreement are determined to be invalid or unconstitutional for any reason by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portion of this Agreement.

20. Default by Dragon: In the event that the CITY claims that DRAGON or any successor has failed to utilize the Property in accordance with this Agreement, then it may give DRAGON written notice of the default claimed by the CITY. The City Planning Staff may seek a hearing on these issues before the Planning Board at any time. If DRAGON does not correct the defaults in a timely manner to the CITY's satisfaction, then the CITY may institute a judicial enforcement action for the breach of this Agreement. If it is determined in such judicial enforcement action that DRAGON has breached this Agreement, and DRAGON fails to comply

with the Agreement in a timely manner after such judicial determination, then the City Planning Staff may recommend to the City Council that this Agreement be terminated, requiring a cessation of the blasting and mining uses permitted under the terms of this Agreement; provided that the termination of the Agreement will not require cessation of the concrete manufacturing and processing and other uses described in Section 2

21. Future Peer Review: If the CITY does not understand the material given to the CITY according to the terms of this Agreement, then it may request a further explanation or clarification from DRAGON at any time. After reviewing the additional information, if the CITY still has a reasonable need to hire engineers or other blasting professionals to help it evaluate the material, then DRAGON agrees to pay the reasonable costs of such peer review; provided, however, that DRAGON must reasonably approve the scope and expected cost of such peer review work in writing before any work is done for which DRAGON is financially responsible.

22. Execution: This Contract shall be executed upon the Portland City Council approval of the rezoning of the Property.

WITNESS:

DRAGON PRODUCTS COMPANY, INC.

\_\_\_\_\_ By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss.

Date: \_\_\_\_\_, 2001

\_\_\_\_\_, as \_\_\_\_\_ of Dragon Products  
Company, Inc., personally appeared before me and acknowledged that the signature on this  
document was his free act and deed acting on behalf of Dragon Products Company, Inc.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

Print Name: \_\_\_\_\_

Draft: September 5, 2001  
P:\CSN\DRAGON\ZoningContract.doc

## **DRAGON PRODUCTS COMPANY, INC. AGREEMENT**

This document is an Agreement made by **DRAGON PRODUCTS COMPANY, INC.**, a corporation with a business address of 38 Preble Street, P.O. Box 1521, Portland, Maine 04104 ("DRAGON").

WHEREAS, DRAGON requested a rezoning of its property located at Ocean Avenue, in the **City of Portland**, a Maine municipality located in Cumberland County and State of Maine ("CITY" or "Portland") in order to permit mining operations on the site of its legally existing nonconforming concrete plant; and

WHEREAS, DRAGON'S property is shown on Portland Assessor's Parcels: Map 416-A, Block A, Lot 2; Map 417, Block A, Lots 4, 5, 10 and 11; and Map 418, Block A, Lots 1, 3, 4, 5, 6, 9 and 10 ("Property"); and

WHEREAS, the Portland Planning Board, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberations, recommended the rezoning of the Property, subject, however, to certain conditions; and

WHEREAS, the CITY, by and through its City Council, has determined that the rezoning would be pursuant to and consistent with the CITY'S comprehensive land use plan and consistent with the existing and permitted uses within the original R-3 zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate to impose the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

WHEREAS, the following plans and documents are attached to this Agreement and incorporated into this Agreement by reference:

- Attachment 1: City Zoning Map change (to be prepared by City)
- Attachment 2: Quarry Plan View (F-1) dated June 5, 2000
- Attachment 3: Plan View of Proposed Berm (F-2) dated June 5, 2000
- Attachment 4: Ocean Avenue Longitudal and Cross Sections (F-3) dated June 5, 2000
- Attachment 5: Reclamation Standards for Portland Quarry
- Attachment 6: Maine DEP Performance Standards for Quarries (20 pages)
- Attachment 7: Blasting Plan (5 pages)
- Attachment 8: Protocol for Complaints and Resolutions

NOW, THEREFORE, in consideration of the zone change made by the CITY, DRAGON hereby agrees as follows:

1. Site Development: The Property shall be developed substantially in accordance with the site plans and elevations shown on Attachments 2-4. DRAGON shall:

a. Remove the existing batch plant and silos, truck fuel depot, conveyor, concrete retaining wall and temporary ditch, and rock crushing facility.

b. Relocate its batch plant and related operations no closer than 350 feet to Ocean Avenue, in the "approximate limit of operation area" shown on Attachment 2.

c. Locate the new rock crusher facility no closer than 750 feet to Ocean Avenue in the operations area shown on Attachment 2, and enclose any rock crushing operations within an insulated building.

d. A new earthen berm, fence, paved entrance, drainage ditch, and climbing lane will be constructed along the west side of Ocean Avenue as shown on Attachments 2-4. The final berm design, landscape planting and schedule will be determined by the Planning Board in its site plan review, after consultation with the City Arborist.

e. DRAGON shall relocate the entrance driveway to the premises, and shall create a slip lane for slow-moving traffic along Ocean Avenue as shown on Attachments 2 and 3. To the extent that any of the new roadway or drainage improvements are located on land of DRAGON, it will deed that portion of its land to the CITY.

f. Develop a stormwater management plan for the entire site, including all improvements along Ocean Avenue and within the operations area according to MeDEP performance standards.

Provided, however, that such development shall be subject to full Site Plan review and approval by the Planning Board, which may approve modifications to these plans as part of the review process.

2. Authorized Uses: DRAGON shall only be authorized to establish and maintain the following uses or any combination of the uses on the Property, provided that such operations are limited to the areas shown on Attachment 2 and further provided that such operations meet the standards set forth in this Agreement and established by State and Federal law:

a. Mining of stone in the "quarry expansion area", including blasting, and crushing of stone for use in manufacture of concrete on the site.

b. Concrete manufacture and processing.

c. Outdoor storage of materials, including rock piles utilized in the concrete manufacturing, material manufactured on the site, including concrete blocks produced as an incidental part of its operations, and related machinery and equipment.

e. All concrete trucks shall be hosed down before exiting the operations area on the Property to reduce the amount of debris and residue tracked onto Ocean Avenue.

f. Vehicle repair and storage and office operations within the existing Dragon Products Company garage facilities (3 bays) shown on Attachment 2.



3. Timing of Uses on Property: Prior to the commencement of any blasting, mining or rock crushing, Dragon shall obtain from the City a Certificate of Occupancy, verifying that all site alterations described in Section 1 and as otherwise approved by the Planning Board have been completed. DRAGON shall discontinue use of its existing batch plant within 30 days of its new batch plant being fully operational, and shall remove its existing batch plant from the Property within 180 days of its use being discontinued.

4. Time Limit for Certain Site Improvements: Dragon shall apply for Site Plan Approval for the site changes described in Section 1 (a, c-f) (all site improvements except the rock crusher) within one year of the rezoning of the Property by the City Council, and shall complete all approved site improvements within two years of final Planning Board approval of the site plan, or this contract shall automatically terminate and the Property shall automatically revert to the R-3 or any successor zone classification.

5. Natural Buffer Areas: The existing trees and other natural vegetation in the "existing wooded buffer strip" on the south side of the site and the "existing vegetation" on the north side of the site shown on Attachment 2 shall remain in their natural state. These areas, or any portions of them, may not be separately conveyed apart from the Property as a whole, while any blasting, mining, concrete manufacturing, or other uses not consistent with the underlying R-3 or successor zone are being conducted on the Property.

6. Limits on Blasting: DRAGON shall limit the total number of blasts on the site to a maximum of twenty (20) individual blasts per year. In no event shall more than four (4) individual blasts per month be permitted. All blasting and rock crushing on the site shall occur on Monday through Friday between the hours of 9:00 a.m. and 4:00 p.m. and between the months of March and November. No blasting or warning signals for blasting shall be done between 7:00 a.m. and 9:00 a.m. or between 2:00 p.m. and 4:00 p.m. on any day when the City of Portland public schools are in session.

7. Blasting Operations: DRAGON agrees to comply with all requirements of the Maine Department of Environmental Protection regarding mining operations on its site, including those

set forth in 38 M.R.S.A. §§490-W to 490EE (Attachment 6) as it may be amended, except where municipal standards adopted by the CITY which are not otherwise described in this Agreement are more restrictive, the CITY standards shall apply. The MeDEP standards shall include, but not be limited to:

- a. Blasting standards described in §490-Z (14), including preblast surveys as described in subsection (F), sound standards described in subsection (H), vibration standards described in subsections (I) - (K), and blasting records as described in subsection (L), including records of peak particle velocity and decibels for each blast.
- b. Dust standards described §490-Z (12)
- c. Reclamation standards described in §490-Z (13)

All blasting shall also be conducted in accordance with the Blasting Plan, Pre-blast Inspection Procedures, Drilling and Blasting Procedures Blasting Records standards shown on Attachment 7.

8. Complaint Protocol: DRAGON shall maintain the complaint resolution protocol and City reporting protocol described in Attachment 8. Furthermore, in the event of prolonged and chronic complaints by area residents of substantial noncompliance with the terms of this Agreement by DRAGON, then the CITY may ask the MeDEP to review DRAGON's blasting operations for compliance with this Agreement. If DRAGON fails to implement any changes recommended by the MeDEP within a reasonable time period, then: (a) the CITY may hire third-party blasting engineers to conduct a 'peer review' of DRAGON's blasting operations and compliance with this Agreement, and the CITY's reasonable costs for such engineers shall be reimbursed by DRAGON; and/or (b) the CITY may seek to enforce this Agreement pursuant to Section 17.

9. Reclamation of Site: Reclamation of the Property into a vegetated, useable condition shall be completed substantially in accordance with the reclamation plan described in Attachment 5 within 2 years of completion of the mining on the Property; provided, however, that such plan shall be subject to full review and approval by the Planning Board before being implemented.

10. City Zoning Standards: DRAGON shall meet all IL zoning standards contained in sections 14-234, 14-235, and 14-236 of the Portland City Code, except as follows:

- a. No new fence shall be required pursuant to 14-235(6) except as shown on Attachments 2-4 and as may be required by the Planning Board during final site plan review.
- b. Outside storage of sand and stone shall not be required to meet the standards of §14-235(10).
- c. Vibration standards in §14-236(3) shall not apply to blasting, and IM vibration standards found in §14-252(3) shall apply to all other operations.
- d. Noise standards in §14-236(1) shall not apply to blasting.
- e. The existing concrete batch plant shall be allowed to generate 78 decibels along the Ocean Avenue frontage until it is removed from the Property, but the new concrete production building shall comply with §14-236(1) when measured at property lines of the Property.

11. IL Zoning Standards: Except as expressly modified in this Agreement, the use and occupancy of the Property shall be governed by and comply with the IL zoning provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

12. Parcels east of Ocean Avenue: As long as it operates its existing concrete batch plant, DRAGON shall maintain ownership of the parcels east of Ocean Avenue across from the Property, more particularly described as Tax Map 418-A, Block A, Lots 5 and 12 in the records of the Assessor of the City of Portland.

13. Liability and Claims: Dragon shall be responsible for all damages determined to be caused by its mining and concrete manufacturing operations. Dragon will acknowledge receipt of any written claim within 2 business days of receipt of the claim in writing. Claims shall include a written estimate of the repair costs by an independent party whenever possible. Claims will be much easier to investigate if the claimant has had a 'pre-blast survey' done of their property as described in section 7 above.

For all property damage claims of \$2,500 or less, Dragon will handle the claim in a 'self-insured' manner. Dragon will promptly inspect the alleged damage with the claimant within 5 business days of receipt of the claim assuming the claimant provides Dragon with reasonable access to the damaged property. Where clear evidence is present to show that the property damage is the result of Dragon activities, full restitution shall be paid based on a written estimate of repair costs by an independent third party or for such amount as can be agreed to be Dragon and the claimant. Dragon shall have the option to make the repairs itself if it believes the written estimate of repair costs to be too high. Dragon will pay the restitution to claimant within 10 business days of the inspection or Dragon will do the repair work itself within 45 days of the inspection, assuming the claimant cooperates by providing reasonable access to the damaged property. Dragon will provide the claimant a written reason why no restitution is offered within 10 business days of the inspection if it does not believe that it is responsible for the damage. The resolution of such property claims will not represent an admission of fault or liability by Dragon, and will not prevent Dragon from defending future claims that may arise. The acceptance of any such restitution will not preclude a claimant from pursuing future claims based on future activities.

For all property damage claims in excess of this \$2,500 'self-insured' level, Dragon shall promptly arrange for the appropriate insurance representatives to appraise the damage and discuss the claim with the claimant. Dragon shall instruct the insurance carrier to make a determination on the claim as soon as possible. If through this investigation, Dragon is clearly found to be responsible for the property damage, Dragon shall instruct the insurance carrier to offer prompt settlement of the claim. If through this investigation, there are issues on Dragon's responsibility for the damage, these issues shall be promptly furnished to the claimant in writing.

so that the claimant can make an informed decision on pursuing the claim. It is Dragon's intent to have such review and investigation complete within 10 business days of receipt of the written claim, with an initial written decision on the claim provided to the claimant within 10 days after the inspection by the insurance agents.

*records of  
meeting date.*

14. Annual Review by CITY: DRAGON shall provide the CITY with its blasting records and its complaints as described in Attachment 8 by the end of each calendar year. The City Planning Department will review these records and will schedule a meeting with DRAGON and residents within 2,000 feet of the quarry on or before March 1<sup>st</sup> of the following year, which may be held by the Planning Board at the CITY's discretion. The purpose of the meeting will be to discuss any issues that may have arisen in the previous year and the best way to resolve them for the upcoming year. If the CITY is not satisfied with DRAGON's response to any issues, then it may initiate the Default provisions of Section 19.

15. DRAGON's Successors: If DRAGON sells or transfers the Property to any new owner in the future which wants to continue the blasting, mining and concrete manufacturing operations, then any prospective new owner must receive written approval from the City of Portland Planning Department as to that owner's technical and financial abilities to comply with the terms of this contract, and the new owner must sign a copy of this Agreement agreeing to comply with all of its terms.

16. Record Notice: DRAGON agrees to record this Agreement in the Cumberland County Registry of Deeds, and to include a reference to it in any deed conveying any of the Property.

17. Enforceability: The above stated restrictions, provisions and conditions are an essential part of the rezoning, shall run with and bind the subject premises, shall bind DRAGON, its successors and assigns, as owner of the Property or any part thereof or interest therein, and any party in possession or occupancy of the Property or any part thereof, and shall inure to the benefit of and be enforceable by the CITY, by and through its duly authorized representatives.

18. Severability: If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

19. Default by Dragon: In the event that the CITY claims that DRAGON or any successor has failed to utilize the Property in accordance with this Agreement, then it may give DRAGON written notice of the default claimed by the CITY. (**Optional**: The City Planning Staff may seek a hearing on these issues before the Planning Board at any time.) If DRAGON does not correct the defaults in a timely manner to the CITY's satisfaction, then the CITY may institute a judicial enforcement action for the breach of this Agreement. If it is determined in such judicial enforcement action that DRAGON has breached this Agreement, and DRAGON fails to comply with the Agreement in a timely manner after such judicial determination, then the City Planning Staff may also recommend to the City Council that this Agreement be terminated, requiring a cessation of the blasting and mining use permitted under this terms of this Agreement; provided that the termination of the contract will not require cessation of the concrete manufacturing and processing uses conducted on the site prior to the date of execution of this Agreement, or as relocated pursuant to this Agreement.

20. Execution: This Contract shall be executed simultaneously with Portland City Council approval of the rezoning of the Property.

WITNESS:

DRAGON PRODUCTS COMPANY, INC.

\_\_\_\_\_ By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss.

Date: \_\_\_\_\_, 2000

\_\_\_\_\_, as \_\_\_\_\_ of Dragon Products Company, Inc, personally appeared before me and acknowledged that the signature on this document was his free act and deed acting on behalf of Dragon Products Company, Inc.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

Print Name: \_\_\_\_\_

Draft: February 8, 2001  
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MEMORANDUM

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**TO:** DAVID GRINNELL  
**FROM:** ANN W. THAYER, C.G., ENVIRONMENTAL MANAGER  
**SUBJECT:** RECLAMATION STANDARDS FOR PORTLAND QUARRY  
**DATE:** 1/26/00

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I understand that the Portland Planning Board has requested additional information on the reclamation of Dragon's Ocean Ave. quarry. The attached is a summary of reclamation requirements that are consistent with 38 MRSA 490-Z Performance Standards for Quarries. Reclamation, as defined under Article 8-A, means "the rehabilitation of the area of land affected by mining, including, but not limited to, stabilization of slopes and creation of safety benches, the planting of forests, the seeding of grasses..." The objective of the reclamation standard is to minimize the impact posed by an affected area.

Dragon will be required to restore the affected lands associated with the Ocean Ave operation to a condition that minimizes the safety risks posed by the site, is protective of future impacts to the environment (from fugitive dusts, soil and sediment run-off, etc) and is consistent with the intended future use of the site (residential, open-space, commercial or industrial use). In general, Dragon has an obligation to stabilize rock slopes to prevent rockfalls and to stabilize overburden in accordance with the best management practices for erosion and sedimentation control. In meeting the performance standard for quarry reclamation, Dragon will be required to address the following:

- A. Highwalls, or quarry faces, are to be treated in such a manner as to leave them in a condition that minimizes the possibility of rock falls, slope failures and collapse. A highwall that is loose may be controlled by the use of blasting or scaling, the use of safety benches, the use of flatter slopes or reduced face heights, or the use of benching near the top of the face or rounding the edge of the face.
- B. Exposed overburden or soil is to be stabilized to minimize erosion and promote sedimentation control. Slopes are to be graded to minimize run-off and exposed soil may be mulched or otherwise covered until a vegetative cover is established.
- C. A vegetative cover is to be established by seeding affected land except for quarry walls and flooded areas. Vegetative cover used in reclamation may consist of grasses, legumes, herbaceous or woody plants, shrubs, trees or a mixture of these.
- D. Unusable structures are to be removed and unusable access roads, haul roads and other support roads are to be reclaimed.
- E. Affected lands are to be reclaimed within 2 years after final operational grading has been reached.



# MAINE DRILLING & BLASTING

Blast Plan Prepared For

Dragon Cement  
City of Portland  
Cumberland County, Maine

## BLASTING PLAN

Submitted by:  
Maine Drilling & Blasting, Inc.

The blasting for this project will be done in a safe and efficient manner by personnel who are highly trained and competent in controlled blasting techniques. They will have access to the latest equipment and technology in the industry.

The Drilling and blasting company will at all times operate within the safety guidelines set by the Mine Safety and Health Administration (Dept. Of Labor) and blasting criteria set by the United States Office of Surface Mines.

To monitor ground vibrations and wave frequencies, seismographs measuring peak ground particle velocities in the three spacial components of vertical, longitudinal and transverse along with their correlative dominant frequencies will be used. Velocities are measured in inches per second (IPS), and the frequency is measured in hertz (Hz). These measurements are recorded within ranges of 0.01 IPS to 5.0 IPS and 5 HZ to 250 HZ. The air blast is measured in dB, within a range of 100 - 142 dB A complete wave form depicting the vibration from the blast and measurement of the air blast over pressure and are included in the printout for each blast. Seismic monitoring will be made on every blast to determine adjustments in size of shots, shot patterns, powder factors and other elements of the design to ensure that the limits set out are not exceeded.

A copy of the seismograph's calibration certificate will accompany the seismographs used on site. All seismographs used will have been calibrated within the past one (1) year.

Due to the sensitive nature of neighbors, sequential blasting methods will be used. This will greatly reduce ground and air vibrations from quarry shots and lessen the likelihood of complaints from blasting.

All explosives, blasting agents and initiation devices will be stored during the day in truck magazines that meet local, state and federal regulations. Magazines will be kept locked at all times, except when materials are removed for use at the blast site. Detonators will be isolated from the explosives by a separate compartment designed to IME SLP No. 22 standards. The vehicles having explosives will be equipped with warning placards, fire extinguishers and back-up alarms. All explosives will be delivered to and vacated from the job site at the beginning and end of each work day. No explosives will be stored on site.

The handling, use and storage of explosives will meet all applicable codes including State, County, and Municipal codes, laws, rules and regulations.

## PRE-BLAST INSPECTION PROCEDURES

There will be pre-blast inspections on all structures within 2000' radius of the blast area which will cover interior and exterior conditions, cosmetic and structural findings. In addition to these inspections, each property owner receives our pamphlet outlining our procedures, methods and safety systems. This pamphlet also answers some of the most common questions asked by property owners.

The fire and police departments will be notified 24 hours prior to each day of blasting and any necessary signs will be erected to notify people that they are entering or leaving a blasting zone. A neighborhood call list will be generated for those who wish to be notified prior to each blast event.

The following notice will be placed in the (newspaper) at a minimum of 5 days before initial blasting is to begin each year.

### NOTIFICATION OF BLASTING

Blasting for the (name of job) is scheduled to begin on or about (date).

Warning whistles will notify person in the area of work:

3 whistles - 5 minutes to blast  
2 whistles - 1 minute to blast  
1 whistles - All clear

( Contractor )  
(Telephone Number)

Any necessary blasting permits will be obtained by the blaster and copies provided to the Contractor at that time.

All blasting operations shall be conducted by experienced, trained and competent persons who understand the hazards involved. Persons working with explosive materials shall:

1. Have demonstrated a knowledge of, and a willingness to comply with, safety and security requirements.
2. Be capable of using mature judgment in all situations.
3. Be in good physical condition and not addicted to intoxicants, narcotics, or other similar type of drugs.
4. The person(s) responsible for the explosives shall possess current knowledge of the local, State and Federal laws and regulations applicable to his work.
5. The person(s) responsible for the explosives shall have obtained a Certificate of Competency or a license as required by State law.

## DRILLING AND BLASTING PROCEDURES

1. Blasting operations shall commence after 9:00 AM and cease before 4:00 PM, Monday through Friday.
2. Blasting may not be conducted at times different from those announced in the blasting schedule except in emergency situations, such as electrical storms or public safety required unscheduled detonation.
3. Warning and all-clear signals of different character shall be audible throughout the blast zone. All persons within the permit area shall be notified of the meaning of the signals through appropriate instructions and signs posted. The following warnings will be used:
  - Three (3) blasts at 5 minutes before the blast.
  - Two (2) blasts at 1 minute before the blast.
  - One (1) blast following the blast indicating all clear.
4. Access to the blasting area shall be regulated to protect the public from the effects of blasting. Access to the blasting area shall be controlled to prevent unauthorized entry at least 10 minutes before each blast and until the permittee's authorized representative has determined that no unusual circumstances exist after the blast. Access to and travel in or through the area can then safely resume.
5. Areas in which charged holes are awaiting firing shall be guarded, barricaded and posted, or flagged against unauthorized entry.
6. All blasts shall be made in the direction of the stress relieved face previously marked out or previously blasted.
7. All stemming shall be minimum as specified using clean, dry crushed stone.
8. Powder factors will be based upon drill patterns and hole sizes which are consistent with rock breakage as well as a minimum impact to neighbors of the quarry. Typical powder factors will range between 1.0 and 1.5 lbs. of explosives per cubic yard.
9. The explosives to be used will consist of ANFO for dry loaded holes and packaged or bulk products for wet loaded holes (i.e. Water Gels, Emulsions). All holes will have an adequate primer charge sufficient to detonate the entire explosive column and the initiation devices will be determined upon conditions (i.e. electric or non-electric detonators)
10. All drill machines will conform with MSHA/OSHA regulations. They will also be equipped with water systems and dust collector devices to lower the impact that dust particles may have on neighbors and the people working around them.

## BLASTING RECORD

A record of each blast, including seismograph reports, shall be retained for at least 3 years. The record shall contain the following data:

1. Name of permittee, operator or other person conducting the blast.
2. Location, date and time of blast.
3. Name, signature and license number of blaster in charge.
4. Direction and distance, in feet, to nearest dwelling, school, church, commercial or institutional building or other structure.
5. Weather conditions.
6. Type of material blasted.
7. Number of holes, depth of hole, burden, spacing and stemming.
8. Diameter and depth of holes.
9. Types of explosives used.
10. Total weight of explosives used.
11. Maximum weight of explosives detonated within any 8 millisecond period.
12. Methods of firing and type of circuit.
13. Type and depth of stemming.
14. Mats or other protections used.
15. Type of delay detonator used and delay periods used.
16. Comments or recommendations by blaster.
17. Seismograph records including:
  - a. Seismograph reading, including exact location of seismograph and its distance from the blast.
  - b. Name of person taking the seismograph reading.



Corporate Offices

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Attachment 8

## PORTLAND QUARRY-PROPOSED PROTOCOL FOR DOCUMENTATION OF COMPLAINTS & RESOLUTION

- Dragon shall provide contact names and telephone numbers of Dragon personnel to be notified regarding complaints associated with the Portland Quarry facility *annually*. These contact names shall include the supervisor of the quarry operation, Dragon's environmental manager and Dragon's divisional vice-president. This information shall be provided to all neighbors / neighborhoods in the Ocean Avenue vicinity of the quarry with the annual tentative schedule of "blast events".
- Dragon shall contact all individuals registering a complaint within 48 hours to discuss the nature of the complaint and appropriate manner in which to address the specific issue. As necessary, Dragon shall arrange for personal meetings with individuals who register complaints, to further discuss their specific issue.
- Depending on the nature and magnitude of a complaint, Dragon may, as deemed necessary, arrange for an additional meeting to address specific issues of a complaint. This meeting potentially could include Maine D.E.P., City of Portland officials, drilling and blasting experts, engineering experts, and appropriate legal counsel.
- Dragon shall investigate all complaints and respond to such, in writing, within 10 days of the initial registering of the complaint. While this written response may not resolve the complaint, it shall include a chronology of the complaint, status to date, and shall be copied to designated representatives of the City of Portland.
- Dragon shall furnish the City, on an annual basis, a summary of complaints from the previous year regarding the quarry operation, and details of resolution plan. Dragon shall maintain the records of complaints for a minimum of 5 years. This records shall be available to the City of Portland upon request.

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**PRODUCTS COMPANY**

ATTACHMENT 8