

Response to Comments

Renewals of Air Quality Control General Permits for Asphalt Plants (GP3) Soil Remediation Units (GP4) and Non-Metallic Mineral Crushing Equipment (GP9)

The draft permits, draft statements of basis and draft permit applications for Asphalt Plants (GP3), Soil Remediation Units (GP4) and Non-Metallic Mineral Crushing Equipment (GP9) were put out to public notice on April 25, 2003. The public notice was published in newspapers in Anchorage, Fairbanks and Juneau, Alaska. The public notice was sent by electronic mail to approximately 200 subscribers of the Air Permits electronic mail public notice mailing list. The public notice was also sent to approximately 200 persons on the Air Permit regular mail mailing list and to persons who had attended public workshops concerning the renewals of these permits held in Juneau, Wasilla, Soldotna and Kodiak, Alaska, in January of 2003. The public notice and copies of each draft permit, draft statement of basis and draft application were sent to all companies known to have that particular type of permit. The public notice was published via the Governor's Online Public Notice Web site and the public notice and draft documents were also made available for download via the Air Permit Program web site. The public comment period lasted from April 25, 2003, through June 2, 2003.

Extensive comments were received from the Alaska Miners Association, Inc., Brechan Enterprises, Inc., the Womens Bay Community Council, Wilder Construction Company, Central Paving Products, Anchorage Sand and Gravel Co, Inc., the Associated General Contractors of Alaska, Exclusive Landscaping and Paving, Inc., three private citizens from Kodiak, Alaska, and the State of Alaska Department of Transportation and Public Facilities. Many comments were repetitive. The comments and responses are numbered. Some responses will refer to a previous numbered comment or response to avoid repeating the information.

The following comments were received from the Womens Bay Community Council:

Comment 1: The commentator expressed concern for having two permits for industrial activity at the same site due to the possibility of the mixing of exhaust plumes and the fact that the topography of a site coupled with local conditions may concentrate pollutants causing increased levels of air pollution. It was suggested that DEC should better monitor air pollution with an ongoing measuring program for air quality and to immediately respond to possible infractions of permit requirements.

Response 1: DEC considered the location of the asphalt plant and soil remediation unit in the same vicinity in its modeling study. The modeling showed that even if two exhaust plumes from two plants located in the same area combined, by the time they did they were so dispersed that there were no modeled violations of the ambient air quality standards. This modeling held true for all cases and considered the topography of the area. DEC does not have funds available to conduct a full time monitoring program for the Bells Flats area nor does DEC have personnel in Kodiak capable of an immediate response to possible infractions of permit requirements.

Comment 2: There was concern expressed that the minimum distance specified in the draft permit between an asphalt plant and a nearby residence (110 yards) was arbitrary and illogical. People felt

that the distance should be the same as for a soil remediation unit (700 yards). If that were not possible the distance should be the same as for temporary asphalt plants.

Response 2: In order to properly respond, the different distances calculated by the air dispersion modeling for the asphalt plants, soil remediation units and and crushers must be compared and understood. The different distances calculated are outlined in Table 1 below.

Table 1. Distances to Compliance Comparisons

	Asphalt Plants	Soil Remediation Units	Crushers
Minimum Distance allowed between emission points and nearest residence	330 feet	2100 feet	400 feet
Minimum Distance at which fugitive dust plan must be submitted	5280 feet	5280 feet	2000 feet
Range of distance in which portable plant may operate no longer than 2 seasons	330 – 800 feet (flat terrain) 330 – 1100 feet (elevated terrain)	N/A	400 – 1000 feet

As a result of air quality dispersion modeling performed for asphalt plants, soil remediation units and crushers the distances in Table 1 above were derived. The first row in the table shows the allowable distance between an emission source and the nearest inhabited structure. Within the distances mentioned the facilities could violate the ambient air quality standards. The limiting pollutant for an asphalt plant was sulfur dioxide. PM-10 (particulate matter less than 10 microns in size) was the limiting pollutant for soil remediation units and the crushers.

The second row of the table deals with fugitive dust and when a dust control plan would be required. Since all three types of facilities generate fugitive dust, each type of facility must take precautions to prevent the release of fugitive emissions of dust. There are slight differences in the amount and character of the dust that can be emitted by these types of facilities. Given a worst case scenario (dry conditions and no controls used for vehicle traffic) both the asphalt plant and soil remediation unit could create modeled violations of the ambient air quality standard for PM-10 as far away as a mile from the plant. This is the reason for the requirement to have a fugitive dust control plan if located within one mile of any inhabited structure. The crusher had the potential to create these types of violations at a maximum distance of 2000 feet and that is the reason for the smaller distance allowed for which a fugitive dust plan must be created for a crusher.

The third row in the table has to do with the prevention of significant deterioration allowable increase requirements known as "increment." These requirements only apply to crushers and asphalt plants. Because of uncertainties in the modeling assumptions for soil remediation units, the department is not setting a location limit based in increment for those units. That is, we are not denying use of the permit at locations where adverse impacts to human health are not predicted. For asphalt plants and crushers, the minimum separation distances of 330 feet and 400 feet in row one of the table still hold true. Row three describes ranges of distances out beyond the minimum distances where the possibility exists that the maximum allowable increase in pollution for the prevention of significant deterioration could be exceeded. This does not mean the ambient air quality standards will be exceeded or that there is any health risk. This simply means that within this maximum radius, the plant is likely to cause increases in concentrations of pollutants which exceed the allowable increases in the prevention of significant deterioration regulations. For a plant that moves to a location and stays there temporarily (not more than two construction seasons), the temporary increases in pollution caused by this plant are acceptable, but the plant can only remain at the location for two years.

Upon examination of the table, the question that immediately arises is why the allowable distance between an asphalt plant stack and a residence is so small compared with a soil remediation unit. The answer lies in the difference in the nature of plant operations and character of the pollutants modeled from each of the two plants. For the asphalt plant the limiting pollutant was sulfur dioxide. The model showed that the distance between the asphalt plant stack and the place where the concentration of sulfur dioxide did not exceed the ambient air quality standards was 110 yards or 330 feet. This was the distance where the sulfur dioxide emissions from the asphalt plant fell below the ambient air quality standards. For the soil remediation unit the limiting pollutant modeled was fugitive dust. When the emissions of fugitive dust were modeled, the distance between the source of the dust and the place where the concentration of PM-10 (particulate matter of less than 10 microns in size) was below the ambient air quality standards was 700 yards or 2100 feet. This was the distance where the PM-10 emissions from the soil remediation unit plant fell below the ambient air quality standards. When the SO₂ emissions from an asphalt plant are modeled, the distance between the exhaust stack and the location where no violations of the ambient air quality standards are detected is far less than the distance between the fugitive emissions of PM-10 from a soil remediation unit and the location where the emissions do not exceed the ambient air quality standards. For details on the assumptions and modeling for the asphalt plants and soil remediation units, please see the statements of basis for each of the respective plants. The commentator also stated that if the distance for an asphalt plant could not be made to coincide with the soil remediation units, that it should be at least the same distance as those for a temporary asphalt plant. This comes from a misunderstanding of what the stated distances for a temporary asphalt plant signify. The distances for a temporary asphalt plant mean that the plant may operate in the area between 330 feet and 800 feet, or between 330 feet and 1100 feet (depending on the elevation of the terrain) from an inhabited structure for no more than two construction seasons. These requirements only apply to portable asphalt plants that relocate to these locations on a temporary basis. If the plant is located farther away from the structure than those distances (800 or 1100 feet) it may operate at those locations indefinitely. The distances are calculated from air dispersion modeling which took into account the maximum allowable increases of the pollutants after the baseline dates as shown in Table 3 in 18 AAC 50.020. While operating within these distance ranges the modeling showed that no violations of the ambient air quality standards took place, but that the PSD increments could be exceeded within those ranges. The reason that operation is only allowed for two construction seasons is to prevent the PSD increment from being exceeded on a permanent basis. Under the department's regulations, temporary

construction activities (two years or less) do not consume increment. For plants that were in operation before the baseline dates, the restrictions on increment increases do not apply. For an asphalt plant that has been in operation in one location since before the baseline date, the only restriction that does apply is the 330-foot separation distance between the plant and the closest inhabited structure.

DEC acknowledges that on the surface it does not seem logical that an asphalt plant can operate for many years within, say, 500 feet of a residence, but if a new asphalt plant moves to within 500 feet of a residence that it would only be allowed to operate in that location for two construction seasons. As counter-intuitive as it may seem, this is the way the regulations for the Prevention of Significant Deterioration (PSD) increment are written. There is no way that DEC is able to interpret or change the meaning of the regulations that will change this situation.

A recurring theme in the comments was that the 330-foot minimum distance allowed between an asphalt plant and the closest inhabited structure was just too short, especially in comparison with the 2100-foot minimum distance for soil remediation units. DEC understands the concerns that people have. If DEC is to establish these distances as legally enforceable limits, DEC must have science and calculations to back up the distances. Any distances specified must be legally defensible rather than based upon instincts, preferences or uninformed comparisons. The distances in the permit are based on the modeling tools and EPA guidance available to the department at this time.

Comment 3: Regarding Condition 39 it was stated that DEC should monitor all complaints and contact the asphalt plant operator right away when complaints are received and to maintain the confidentiality of the complainant. The commentator also suggested that the asphalt plant operator be required to report to DEC if he had initiated corrective action on an emission complaint and the complaint had been corrected.

Response 3: All complaints received are logged into a tracking system and the operators of the facility named in the complaint are contacted by a compliance officer as soon as it is practicable. This is standard procedure. Regarding confidentiality, DEC does not routinely disclose the identity of complainant when contacting facilities on emission complaints. If a facility were to request DEC's tracking system records concerning complaints about that facility under a Freedom of Information Act request, those records would contain the names of the complainants and would be required to be disclosed as a matter of law. There is no privacy privilege that would exist between the complainant and agency when making these types of complaints. With regard to requiring the facility to report if it had initiated successful corrective action concerning an emissions complaint, this report is required, but allowed to be deferred to the next semi-annual facility operating reporting period. If the corrective action initiated by the facility is successful, there would be no need for an immediate report to DEC and the report would serve no useful purpose.

Comment 4: Concerning soil remediation units the commentator stated that any soil burning unit of any size should be required to obtain an operating permit and that noise levels should be no higher than 50 decibels and that there should be public hearings prior to all permit renewals.

Response 4: Alaska law requires operators of soil remediation units (SRUs) to obtain an operating permit if the plant meets any of the following criteria:

- a potential to emit greater than 100 tons per year of a regulated air contaminant,

- a source with a rated capacity greater than 100 Million Btu/hr,
- a controlled source with a total rated capacity or equipment throughput greater than 5 tons per hr,
- a controlled source with a rated capacity greater than 50 Million Btu/hr

Most soil remediation units are required to obtain permits due to the fact that they are industrial processes with a rated capacity which exceeds 5 tons per hour and they require control devices in order to comply with emission standards. The comment #4 above refers to a hot air vapor extraction unit that operates on Kodiak Island. These types of soil treatment facilities are not industrial processes with capacities greater than 5 tons per hour. They do not contain a heat source of a size that requires permitting. These units heat air which is passed through the contaminated soil to drive off the hydrocarbon contamination. The heated air containing the driven-off hydrocarbon products is returned to the burner where the hydrocarbon vapors are consumed. These hot air vapor extraction soil treatment facilities do not require air quality control permits. With regard to noise levels, the Air Permit Program does not regulate noise levels. Any noise emanating from any industrial facility would fall under any public nuisance ordinances that may apply in the local municipality. The comment was made that public hearings should be required before any permit renewal. The department makes every effort to afford the opportunity for the public to comment on all new permits and permit renewals. The vehicle for public comment can be through public hearings or through written comments. Many times it is not economically feasible to hold a public hearing for every proposed permit and permit renewal. The department encourages the use of e-mail, faxes, and the U.S Postal Service as ways for the public to make comments on proposed permit actions.

Comment 5: This comment from a Kodiak Island resident just expressed general concern with the interaction of industrial facilities with nearby residential zones and recommended uniformity of the separation distances and recommended that the 2100 foot distance be utilized for all facilities.

Response 5: See Response 2 above which explains why a one size fits all approach is not appropriate for the separation distances.

Comment 6: This comment consists of a page and a half from a Kodiak resident. At first the commentator touched on subjects beyond the scope of the general permit renewals such as noise, smell, destruction of the land, contamination and overuse of groundwater, degradation of various mountain and bay views etc. The commentator states that these problems are the direct result of the Borough and DEC being reluctant to stop a local industry from "taking advantage of what is "legal" although certainly immoral."

Response 6: The comments concerning noise, smell, destruction of the land, contamination and overuse of groundwater etc. are beyond the scope of the air quality control general permit renewals for asphalt plants, soil remediation units and crushers. DEC does its best to protect human health and the environment working within the framework of the laws given to it to follow by the Alaska Legislature, the Clean Air Act and guidance from the U.S. Environmental Protection Agency. DEC Air Quality Control Regulations are written with the express purpose of protecting human health and the environment. The companies DEC regulates must operate in accordance with permit terms and conditions based on these regulations. The conclusion that a company's activities are either moral or immoral is one that citizens in this society are certainly free to make. It is not appropriate for a state agency to make these types of judgments or participate in characterizations of this nature.

Comment 7: Quoted verbatim: "My major concern is as follows: Location: The location of these facilities is too close to residential areas. The manner of enforcement is totally in the hands of the permit holder and the DEC does not have the manpower to oversee these facilities. This leaves the local residents with the responsibility to monitor and report concerns. This is unacceptable and has the potential to cause animosity between residents and local industry. Many towns in Alaska are as small as (or smaller than) Kodiak. It is an untenable situation. Many residents have been unable or unwilling to speak up due to their working or personal relationships with various industry personnel. A strict guideline for distance would alleviate most of the objections stated (and experienced) when these facilities are too close. 110 yards is ridiculously close for all of the reasons previously stated. Not only is it too close in good weather, but in our specific location, inversions are frequent and homes built on the hillsides are subject to multiple bombardment. Careful consideration of distance between residential neighborhoods (not just individual residences) will alleviate these problems and foster positive relationships between home owners and industry. It is time for DEC to take a stand and set strict guidelines that include minimum distances that are acceptable to homeowners and buffer zones that protect neighborhoods from industrial activity."

Response 7: DEC agrees that it does not have adequate personnel to monitor all industrial activities and emissions throughout the state. That is the reason DEC must rely upon self reporting by the facilities and by citizen reports of excessive emissions. DEC agrees that in some areas of the state the proximity of residential areas to industrial areas has resulted in problems. The location of residential areas in relation to industrial areas is the province of local planning and zoning handled by local municipalities and boroughs. With regard to the adequacy of separation distances, see response number 2.

Comment 8: "Bruhn Point is a good example of a facility that is far enough away from a residential neighborhood, however, it is a travesty that this facility has NO ONE to monitor what they release into the soil and water. Distance alone is not the answer. Distance in conjunction with enforceable guidelines that protect our environment and quality of life is a necessity."

Response 8: The facility at Bruhn Point is the hot air vapor extraction unit described in response 4 which does not require an air quality control permit because it falls outside the parameters where a permit would be required.

Comment 9: The next set of comments comes from another Kodiak Island resident. The comments were prefaced with a statement that DEC has a responsibility to enforce 18 AAC 50.110 which prohibits "any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property." The prefatory comments went on to say that the commentator understood that even a facility in compliance with its permit and all the regulations would still release high levels of fugitive emissions, products of incomplete combustion and toxic emissions. The commentator stated that "these permits fall short in detailing the true air pollution from these facilities and our specific conditions including wind, weather and mountain factors." The commentator also mentioned buck passing between the state and municipal government regarding responsibilities for regulating these types of activities.

Response 9: DEC agrees that 18AAC 50.110 is difficult to define and enforce. The modeling that was performed which resulted in the distances took into account wind, weather and terrain factors as best as could be approximated. With regard to responsibility between the state government and

municipalities or boroughs, DEC has acknowledged that in the past there were no "location" requirements in these permits. What is underway now is an attempt to correct this deficiency.

Comment 10: This comment reiterates the assertion that the 110-yard (330-foot) minimum separation distance between an asphalt plant and the nearest inhabited structure is insufficient. The commentator states that it would be better to err on the side of larger figures than conservative ones because of unknown health risks to people who live near the plants. The commentator states that the meteorological data used in the modeling from the U.S. Coast Guard Base is not truly representative of the wind and weather conditions that exist in Bells Flats. The commentator acknowledges that many paving projects exist in locations where there is insufficient space to be in compliance and suggests a separate classification for "small jobs" with a maximum number of hours that an asphalt plant could operate. The commentator then states that it would be better to have stronger standards for the asphalt plants with permanent locations than those that operate temporarily less than two construction seasons in order to avoid the PSD increment requirements.

Response 10: With regard to the minimum distance requirements for asphalt plants, see the discussion under response 2. With regard to the meteorological data used in the modeling, the Coast Guard Base in Kodiak is less than three miles from Bells Flats. Having good reliable data that close to a modeled source in Alaska is a rarity. While the topography at the Coast Guard Base is not the same as what is in Bells Flats, the meteorological data from the Coast Guard station is considered valid for Bells Flats. The commentator mentioned the difficulties of finding suitable locations for asphalt plants in small Alaskan communities and proposed a separate classification for "small jobs" rather than the time consuming effort of obtaining a "facility specific" permit. That suggestion is precisely the reason for the Asphalt Plant General Permit. This general permit is designed to be used by small portable asphalt plants that must move about and change locations. The last comment again suggests that more stringent distance requirements should apply to asphalt plants that remain in locations for very long periods of time rather than only restricting portable plants to two construction seasons within certain distances. This comment was already dealt with in response number 2.

Comment 11: Commentator voiced support for dust control plans but stated was more concerned with Volatile Organic Compounds (VOCs) that have been recorded as far as a mile from asphalt plants. The commentator recommended increasing inspections for noncompliant facilities and making review of reports submitted a top priority. The commentator asked if it would be possible to take into account the temperature of the drum mixer in the modeling assumptions. The reason for this was that the hotter the mix the more VOCs are produced and the farther they might travel at higher concentrations. Making reference to a lawsuit, the commentator requested that any future permits prohibit the siting of an asphalt plant and soil remediation unit on the same site. The commentator also then stated that the modeling that was done was not adequate as it did not take into consideration fugitive emissions, toxic emissions and products of incomplete combustion (PICs).

Response 11: The department agrees that Dust Control Plans that are effective should provide good results in controlling fugitive dust emissions. With regard to VOCs, the following information was taken from the executive summary of a U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health Hazard Review of the Health Effects of Occupational Exposure to Asphalt in December 2000: "In this hazard review, NIOSH has evaluated the scientific evidence concerning the potential health effects of occupational

exposure to asphalt. On the basis of available data from studies in animals and humans, as well as *in vitro* studies, NIOSH concludes the following about the acute health effects of asphalt exposure:

The findings of this hazard review continue to support the assessment of the 1977 NIOSH criteria document on asphalt fumes, which associated exposure to asphalt fumes from roofing, paving, and other uses of asphalt with irritation of the eyes, nose, and throat. Furthermore, in studies conducted since the publication of the 1977 criteria document, these symptoms have also been noted among workers exposed to asphalt fumes at geometric mean concentrations generally below 1 mg/m³ total particulates and 0.3 mg/m³ benzene-soluble or carbon disulfide-soluble particulates, calculated as a full-shift TWA. Recent studies also report evidence of acute lower respiratory tract symptoms among workers exposed to asphalt fumes. These data are currently being further analyzed to assess the relationship between lower respiratory tract symptoms and asphalt fume exposure. The available data on chronic pulmonary effects (such as bronchitis) are insufficient to support an association with asphalt fume exposures.

In 1988, NIOSH recommended to OSHA that asphalt fumes be considered a potential occupational carcinogen based on the results of an animal study in which laboratory-generated roofing asphalt fume condensates induced malignant skin tumors in mice. Since then, investigators have described differences in chemical composition, physical characteristics, and biological activity between asphalt fumes collected in the field and those generated in the laboratory. The relevance of these differences in ascribing adverse health effects in humans is unknown. Data from studies in humans indicate that some workers exposed to asphalt fumes are at an elevated risk of lung cancer; however, it is uncertain whether this excess is related to asphalt and/or other carcinogens in the workplace. Although carcinogenic PAHs have been identified in asphalt fumes at various worksites, the measured concentrations and the frequency of their occurrence have been low. Based on evaluation of these data, the following conclusions were drawn regarding the carcinogenicity of asphalt under several conditions of use:

Data regarding the potential carcinogenicity of paving asphalt fumes in humans are limited. Only one study identified B(a)P (benzo(a)pyrene) in field fumes, but it was unclear whether paving asphalt fumes were the source of the B(a)P. Chrysene has been identified only in laboratory-generated paving asphalt fumes. The available data from studies in humans have not provided consistent evidence of carcinogenic effects in workers exposed to asphalt fumes during paving operations. No animal studies have examined the carcinogenic potential of either field- or laboratory-generated samples of paving asphalt fume condensates. Although genotoxicity assays (but no carcinogenicity assays) using laboratory-generated and field-generated (storage tank paving asphalt) fumes have been conducted, only the laboratory-generated fumes were genotoxic. *Therefore, NIOSH concludes that the collective data currently available from studies on paving asphalt provide insufficient evidence for an association between lung cancer and exposure to asphalt fumes during paving. The available data, however, do not preclude a carcinogenic risk from asphalt fumes generated during paving operations."*

This study was focused on workers in the paving industry who worked in close proximity with asphalt fumes on a daily basis. The distances between these workers and the source of asphalt fumes was measured in feet or tens of feet rather than the hundreds of feet of separation required in the asphalt plant air permits. The NIOSH conclusion that there was insufficient evidence for an association between lung cancer and exposure to asphalt fumes during paving for persons who work in the asphalt industry on a daily basis year in and year out is an indicator of the relative

degree of the risk of cancer from the asphalt fumes. There is no question, however, that the asphalt fumes can cause irritation of the eyes, nose, and throat.

With regard to increased inspections for noncompliant facilities and priority reviews of operating and excess emission reports, these recommendations have an impact on how the Compliance Group conducts its operations and may choose to prioritize its efforts, but the recommendations have no bearing on the proposed permits for asphalt plants, soil remediation units and crushers. The commentator also recommended prohibiting the co-location of a soil remediation unit and an asphalt plant on the same site. This situation has already been discussed in response 1. With respect to taking high temperatures into account in the modeling, the exhaust temperatures and other parameters used are discussed in the modeling attachment to the statement of basis for the asphalt plants. The limitations of the modeling are also discussed in the modeling attachment.

Comment 12: For the soil remediation unit permit the commentator expressed approval for the wording in the statement of basis that stated that the required afterburner would be used to provide more complete combustion of the petroleum vapors driven off contaminated soil. The commentator then questioned why the hot air vapor extraction system at Bruhn Point was not required to have an air quality control operating permit from DEC. The commentator stated that the operation of this plant had resulted in irritating fumes and that the normal avenues of complaint did not exist for this operation since it had no permit. The commentator also stated that the fire safety precautions were not adequate for the soil remediation unit at Bells Flats as the unit had large amounts of propane to use as fuel stored at the site.

Response 12: The commentator was in favor of the use of the afterburner to reduce products of incomplete combustion (PICs). The afterburner is more for combusting the hydrocarbon vapors driven off the contaminated soil in the thermal desorption unit. The afterburner combusts the hydrocarbon vapors as the temperature in the thermal desorption unit is only sufficient to drive the vapors from the contaminated soil. This combustion process is not designed for addressing products of incomplete combustion which typically form in an incinerator which is burning solid hazardous waste. This is an entirely different situation where dioxins and furans can be formed. The formation of dioxins and furans in a soil remediation unit treating petroleum contaminated soil such as is allowed in these general permits is not generally considered a significant problem. The hot air vapor extraction operation at Bruhn Point has been discussed in response 4. The adequacy of the fire suppression equipment for the soil remediation unit in Bells Flats was questioned, but this issue is not related to the renewal of the Air Quality General Permits for asphalt plants, soil remediation units or crushers.

Comment 13: The commentator stated that the 400-foot separation distance between a crusher and the nearest inhabited structure was confusing when compared with only 330 feet for an asphalt plant.

Response 13: The separation distance modeled for a crusher is based on fugitive dust from crusher operations. The separation distance of 330 feet for an asphalt plant is based on sulfur dioxide emissions. Both crushers and asphalt plants will require fugitive dust control plans under certain conditions. See response 2.

The following comments were made by Brechan Enterprises, Inc.

Comment 14: The commentator stated that his company had operated an asphalt plant in the same location for more than 30 years and crushers at certain quarries for 21 years. The commentator was concerned that residences had been constructed now within 800 feet of the asphalt plant and within 1000 feet of one of the crushers. The commentator felt that grandfather protection language was warranted to prevent a shutdown of the plant due to homes being constructed, purchased and occupied too near the plant.

Response 14: The concern of the commentator was not warranted. He was misreading and not understanding the requirements in the permit. The plant he operates was constructed prior to the baseline dates for the application of the maximum allowable increases under the prevention of significant deterioration regulations. The 800 foot and 1100 foot distances he mentioned in his comment only apply to new plants that move into an area where they had not been before causing an increase in emissions in that area. If new plants move into an area within these distances of occupied structures, they may only operate in these locations for not more than two construction seasons.

Comment 15: The commentator objected to the inclusion of Standard Permit Conditions 10 through 14 in the General Permit for a crusher as it is not possible to perform source testing on a crusher. These standard permit conditions are concerned with source testing.

Response 15: The department understands that it is not possible to perform source testing on a crusher. The department is required to use the standard permit conditions in all permits. The department will place a note in the statement of basis that source testing is not required for crushers even though the standard permit condition relating to source testing is included in the permit language.

The following comments were made by Wilder Construction Company:

Comment 16: The commentator questioned why DEC is required to be notified when a belt or screen is changed in a conveyor system for a crusher operation. He asserted that nothing had changed that would change the capacity of the operation.

Response 16: 40 CFR 60.676 requires this exact information to be reported to the U.S. EPA. The information requested is the total surface area of the old and new replacement screens and the width of any existing belt and the width of any replacement belt. By comparing the total surface area and width of the replaced components to the original components a judgment can be made as to whether or not the capacity of the equipment has been increased. This would be a determining factor in whether or not 40 CFR Subpart OOO applied to the equipment. The authority for the requirement to report is in 18AAC50.200. Information Requests.

Comment 17: The commentator requested a definition of "location" as it applies to the requirement to provide a dust control plan for a crushing operation. He stated that the 2000 foot requirement was excessive in the experience of his company.

Response 17: The word "location" in the context of a crushing operation must mean the location of the property line of the facility. That is, when measuring between the "location" of the plant and the nearest inhabited structure, the distance must be taken between the property line and the structure. The reason for this is that a crushing operation has the potential to emit fugitive dust not only from the crushing operation itself, but also from the piles of aggregate located on the property

and from roads that pass through the property. If the crusher were located in the center of the property, measuring from the crusher itself out to the nearest inhabited structure would not be a proper measure of the distance between a source of fugitive dust and the structure. The 2000 foot minimum distance at which a fugitive dust plan must be provided comes from the air quality dispersion modeling that was performed for crushing operations. The modeling showed that under certain conditions that the fugitive dust from a crushing operation could have adverse effects out to a distance of 2000 feet.

Comment 18: The commentator again questioned the definition of location as it would apply to a crushing operation. He stated that the requirement to be located more than 400 feet from an occupied structure was not practical as some property owners live on site closer than 400 feet to crushing operations. He also stated that some semi permanent operations would fall under the 400 – 1000 foot range of distance to an inhabited structure and that this increment-consuming restriction was not practical for that reason either. He stated that it was not fair to penalize an entire industry for the problems that had existed in the summer of 2002 with just two operators in Kodiak and Wasilla. He also stated that the 30 day notification requirement for moving a crushing operation was not always possible due to the short construction season in Alaska.

Response 18: The definition of what is meant by "location" with respect to a crushing operation has been explained in response 17. The requirement to be located further than 400 feet away from any occupied structure applies because the air dispersion modeling for a crushing operation shows violations of the ambient air quality standards for PM-10 will occur within that 400 foot distance. The application of the restrictions to not operate more than two construction seasons in the range of more than 400 feet but less than 1000 feet arises from the possible violations of increment that may occur in this operating distance range. The increment consumption issue was discussed in response 2. With respect to penalizing an entire industry for the actions of just two companies over the past summer, DEC does not agree that the purpose of these new location requirements is to penalize anyone. The purpose of the new location requirements is to fill a gap where no requirements had existed before in order to protect the health and well being of residents of the State of Alaska. With respect to the 30 day notification issue, the legislature recently passed a new Air Bill that will allow a reduction in the 30 day notification time for movement of a stationary source to a temporary location from 30 days to 10 days. It is anticipated that the governor will sign the new Air Bill into law before these general permits are ready to be issued. DEC will change the 30 day notification requirement in these permits to a 10 day notification requirement as provided for in section AS 46.14.215 of the new Air Bill.

Comment 19: The commentator pointed out that the Alaska Construction season only typically encompasses the summer months. He stated that it would be most desirable to require just one operating report that would cover the entire construction season. This one report would save duplicative efforts reviewing two reports and save paperwork as well. He also questioned why the semi annual and annual reports must be notarized.

Response 19: 18AAC50.350(i)(5)(C) requires that reports must be submitted at least every six months. The reporting required for asphalt plants, crushers and soil remediation units calls for reports covering the periods from October through March (the normally dormant period) and from April through September (the normally active period). For the dormant period it is permissible to simply submit the report form saying that the plant was not operational during this time. The signatures on permit applications and the annual compliance certifications are required to be

notarized in accordance with 18 AAC 50.205. The requirement to have notarized signatures on the semi-annual operating reports has been removed from the permits.

The following comments were made by Exclusive Landscaping and Paving, Inc.

Comment 20: The commentator objected to the requirement not to exceed the operating rate at which a source test showed compliance for an asphalt plant.

Response 20: The commentator also stated that it was very difficult to achieve the maximum operating rate due to many variable conditions. If that is the case, then no asphalt plant will be tested at near its maximum operating rate. The commentator stated that most likely his plant would be tested at around 83% of the maximum rate. If that is the maximum operating rate that he can expect to achieve, and that is the operating rate at which he is tested and shows compliance, then that is the maximum rate at which the plant should be operated. If the permit allowed the plant to operate at throughput rates which exceeded the rates at which the plant had been source tested, the department could not be assured that the particulate emissions from the plant would not exceed their emission standards.

Comment 21: The commentator stated that most asphalt plants cannot comply with the opacity requirements if they are using elevated temperatures in order to handle Alaska DOTPF mandated modified asphalt oil. This new asphalt formula requires the higher temperatures and the use of the formula is required by the State of Alaska for paving jobs on state highways.

Response 21: At the present time 18AAC 50.055(a)(1) and (4) state that visible emissions, excluding condensed water vapor, from an industrial process or fuel burning equipment or an asphalt plant, may not reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. The 20 percent opacity limit is a standard that has been in effect for many years. There would have to be a change made in the regulations if the department were to relax the opacity standard.

Comment 22: The commentator stated that the location requirements conflicted with current local land use zoning laws in the Fairbanks North Star Borough. The commentator stated that the location restrictions did not grant any grandfathering for facilities which had residential or commercial neighborhoods moving into the vicinity of the facility. The commentator recommended that all facilities be grandfathered for any location issues as of the effective date of the general permit. The commentator stated that small communities such as Kotzebue would not be large enough to provide for the required separations. The commentator also raised the point that in many cases the State of Alaska designates the location where the asphalt plant or crusher may operate and the operator has no say in the matter.

Response 22: The Comprehensive Plan for the Department of Community Planning for the Fairbanks North Star Borough was reviewed and no incompatibilities or conflicts were found with the location requirements in these permits. The statement that there are no provisions for grandfathering in the permits is not correct. The permits allow facilities which were in place prior to the baseline dates in 18 AAC 50.020 to operate with the minimum required distances of 330 feet for asphalt plants and 400 feet for crushers. The baseline dates for PM-10 range from November 1978 through March 1982 depending on the location in the state. The baseline dates for sulfur dioxide range from June to October 1979. (Please refer to Table 2 Baseline Dates in 18AAC50.020.) The grandfather provisions in these permits can not be made effective as of the

effective date of the permits. The Air Quality Control Regulations in 18AAC50 already have provisions for grandfathering based on the prevention of significant deterioration regulations. With regard to the lack of space in small villages such as Kotzebue, the department believes this comment comes from a lack of understanding of the location requirements. For an asphalt plant temporarily moved into a small village, a place must be found more than 330 feet from the nearest inhabited structure for the asphalt plant. If the location is between 330 feet and 800 feet of the nearest structure, the asphalt plant may remain onsite for no longer than two construction seasons. If the location is more than 800 feet away from the nearest structure the asphalt plant may remain onsite indefinitely. In the example given, for Kotzebue, there are many locations out on Air Force Road on the side of the airport away from the city towards the municipal dump where an asphalt plant could be placed that would be more than 330 feet away from the nearest residence. The comment concerning the State designation of locations for siting asphalt plants and crushers is correct. The operator still must not locate the plant closer than 330 feet for asphalt plants or 400 feet for crushers from the nearest inhabited structure. If the State DOT designates a location too close to an inhabited structure, an alternate site should be selected.

Comment 23: Another comment was made to eliminate the two semi annual reports as one of them served no useful purpose.

Response 23: The requirement to submit two semi-annual operating reports was covered in response 19.

The following comments were made by the Associated General Contractors of Alaska:

Comment 24: The commentator questioned why the permit required source testing every five years or if 7200 hours of operation occurred.

Response 24: The 7200 hours of operation represents an asphalt plant operating at 12 hours per day for 120 days per year for 5 years. This figure represents the high end of hours of operation for most asphalt plants in Alaska. If a plant exceeded 7200 hours of operation it would be considered to have exceeded five years of typical Alaskan operation. It would be time for a source test. The department is not aware of any plant that operates so many hours so the point is moot. The vast majority of asphalt plants would require a source test every five years of operation.

Comment 25: The commentator questioned why a second source test would be required within a year if a plant tested in excess of 90% of the grain loading standard for asphalt plant emissions.

Response 25: The department believes that a repeat source test is necessary within a year of a test in which a plant exceeds 90% of the standard. If the plant establishes that it routinely operates at this level, but below the standard, the compliance group can take this into consideration and exercise discretion as to whether or not to continue to test on a yearly basis. The department has found that if the pollution control equipment is operating properly at the time of the source test that the results will be well below 90% of the standard. If the plant or pollution control equipment is not functioning properly, the result is usually a failed source test which then requires a retest on a schedule determined by the compliance group.

Comment 26: The commentator challenged the requirement to operate at or below the level of throughput at which the last source test showed compliance. The commentator suggested that they be allowed to exceed the throughput rate at which compliance had been shown by 10% or to give

the operator the option of using the higher of the production level associated with the current source test or the production level associated with any source test in the past five years which had shown compliance.

Response 26: This comment was also raised in comment 20 and dealt with in response 20. The department feels that it is more appropriate to base the throughput on the most recent source test rather than previous ones as conditions in the plant could have changed. The department believes it is not appropriate to allow the throughput rate at which compliance was shown to be exceeded by 10 percent because the department cannot be sure that the grain loading emission standard will not be exceeded.

Comment 27: The commentator brought up the question of the new formula asphalt required to be used by the State Department of Transportation which requires heating to a temperature at which it is highly likely that opacity violations would result.

Response 27: See **Response 21:** At the present time 18AAC 50.055(a)(1) and (4) state that visible emissions, excluding condensed water vapor, from an industrial process or fuel burning equipment or an asphalt plant, may not reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. The 20 percent opacity limit is a standard that has been in effect for many years. There would have to be a change made in the regulations if the department were to relax the opacity standard.

Comment 28: The commentator wanted a definition of "near" as was used in the discussion of reasonable precautions to protect against fugitive dust. The word "near" was used to describe the location of an asphalt plant or crusher installation in relation to a "nearby" inhabited structure. The question had to do with the reasonable precaution of shutting down operations when the wind would be blowing in the direction of a structure located "near" the asphalt plant or crusher operation.

Response 28: The department agrees that the use of the term "near" or "nearby" is vague and open to interpretation. The department also believes that the "reasonable precautions to prevent fugitive dust" could be open to interpretation as well. The department is attempting here to grant some leeway and allow some judgment on the part of the operators to operate their plants in a reasonable manner so as not to create a situation which results in a violation of 18 AAC 50.110. A plant could create a violation of 18AAC50.110 at any distance beyond 330 feet (beyond 330 feet because no inhabited structure can be located closer than 330 feet to an asphalt plant). Depending on conditions, the wind could cause problems with fugitive dust up to a mile away from an asphalt plant. This is why a dust control plan is required if there are any inhabited structures with a mile of any asphalt plant. There really is no need to have a precise definition of "near" or "nearby" as used in this context. The reasonable precautions to prevent fugitive dust says that they *include as necessary* the following items. The operative phrase is *include as necessary*. The more important requirement here is that the operator act properly to select the appropriate measures to keep fugitive dust emissions from the source to a minimum. The permit condition mentions a range of activities that could be used to minimize fugitive dust emissions. The department does not expect that all measures would be used or be applied or even would be necessary. This is a case where the department is willing to allow the operator to pick and choose from a range of appropriate actions based on local circumstances to achieve the desired results in the most reasonable manner. The department is not going to spell out a definition of "near" or "nearby" in terms of so many feet or

yards. The department is going to rely on the good judgment of the operators to operate their plants in a responsible manner using the reasonable precautions most appropriate to the situation.

Comment 29: Commentator stated that if the department is going to require a fugitive dust plan specifically for a facility other than the one required by the location condition that the department should spell out the reason that the plan is required and make possible suggestions on how the facility can address the department's concerns.

Response 29: The department agrees that if it will require a dust control plan for other reasons than what are specified in the location condition, that the compliance group will advise the permittee of those reasons and concerns and make any appropriate suggestions for the content of the dust control plan.

Comment 30: The commentator stated that the location condition should address the situation where a residence is erected or located in the vicinity of an already existing plant.

Response 30: The department has already explained that the only requirement for asphalt plants that were in existence prior to the baseline dates is that they must be located no closer than 330 feet to a the nearest residence. The commentator brings up an interesting point, however. If an asphalt plant was constructed after the baseline date and then later a residence was constructed within 800 feet of the plant, what then? An asphalt plant constructed after the baseline dates is subject to the prevention of significant deterioration (PSD) increment requirements. If the possible increment violations can extend out to within 800 feet of the plant, then no houses should have been constructed within 800 feet of the plant. If a residence was constructed within 800 feet of the plant the residence must be assumed to be located in ambient air. If the plant were newly arrived in the location, it would be on notice that it could not remain longer than two construction seasons. If the plant had existed a long time but was constructed after the baseline date, and there are residences that were built between 330 feet and 800 feet away, the residences are located in the radius where violations of the PSD increment can occur. This is a problem for the plant operator as he now has the possibility of the threat of shutdown or extra control measures being required by DEC because of the proximity of the residences. The home owner has a problem as he may be impacted by emissions from the asphalt plant and may not be able to readily sell his property due to its location and proximity to the asphalt plant. DEC has a dilemma as well. The agency has the mission to safeguard public health which could cause it to take enforcement action against the facility to either move or reduce its emissions. The dilemma comes from trying to resolve an issue of basic fairness. The reason these enforcement measures may be necessary has been caused by new homes being constructed too close to an existing industrial operation. The construction of these residences is the result of a failure of local zoning to provide adequate protection against incompatible land use. The homes were purchased by persons knowing full well their proximity to the industrial operation. Now the home owners look to DEC to resolve the situation in such a way that their problem goes away. The only entity over which DEC has any enforcement authority is the industrial activity that has been in that same location for many years. These situations already exist in several areas of the state. There are no satisfactory or fair solutions to them. They must be handled on a case by case basis. These situations should not be addressed in the general permits

Comment 31: The comment that the requirement for two semi-annual facility operating reports is burdensome was made again.

Response 31: This comment has been covered in response 19 and response 23. 18AAC50.350(i)(5)(C) requires that reports must be submitted at least every six months.

The following comments were made by Anchorage Sand and Gravel Co. Inc.

Comment 32: The commentator questioned the requirement to perform a source test once every five years or 7200 hours of operation. He stated that this could cause a well maintained facility to perform a source test every year. He also questioned the requirement to redo the source test within one year if the plant tested in excess of 90% of the standard.

Response 32: These comments have been considered and covered in responses 24 and 25.

Comment 33: The commentator stated that in the precautions to prevent fugitive dust in the asphalt plant permit it made reference to "treated and untreated stockpiles of soil" or aggregate. He stated that this was an acknowledgment of the use of asphalt plants to treat contaminated soil. He stated that the general permit needs to be revised to contain specific provisions to allow these activities while providing the necessary controls.

Response 33: The department does not agree. The inclusion of the words "treated and untreated soil piles" in the fugitive dust discussion of asphalt plant operations was an error carried over from the soil remediation unit fugitive dust discussion. The phrase will be removed. Asphalt plants are not to be used for soil remediation. The only function that asphalt plants are allowed to perform with respect to contaminated soil or contaminated aggregate is to include this aggregate into the paving asphalt being created. This allows small amounts of contaminated soil or aggregate to be utilized in road paving instead of being remediated and reclaimed as is done in a typical soil remediation unit.

Comment 34: The commentator asked for a definition of the word "near" and asked how to defend against frivolous claims that "the wind was blowing in my direction." This was in relation to the reasonable precautions against the release of fugitive dust.

Response 34: This comment has been covered in response 28.

Comment 35: The commentator stated that the location condition dealt with land use issues that are addressed by the boroughs and there is no need for DEC to incorporate the land use issues into an air operating general permit.

Response 35: DEC does not agree that the location issues have been addressed by the boroughs. The boroughs do not have the capability of performing air quality dispersion modeling and do not have a way of calculating or estimating the distances that have been incorporated into the location conditions. The boroughs bear some responsibility in all of this to have adequate zoning laws and to oversee functional compatibility between areas zoned for industrial or other purposes. However, the boroughs do not have the ability or responsibility to regulate these issues to the level of detail that DEC does with respect to ambient air quality.

Comment 36: The commentator recommended that provisions for pre-existing facilities be incorporated into the permit language. This comment was made in the context of an asphalt plant that had suffered encroachment of non compatible land uses.

Response 36: The issue of the encroachment of non compatible land uses near industrial facilities has been covered in response 30.

The following comments were made by the Alaska Miners Association, Inc.:

Comment 37: The commentator stated that the fugitive dust and location conditions dealt with land use issues that are addressed by the boroughs and local communities and there is no need for DEC to incorporate the land use issues into an air operating general permit and should leave these issues up to the municipalities and boroughs.

Response 37: See response 35.

Comment 38: The commentator expressed disapproval of additional source testing if the facility tests above 90% of the standard, but within limits.

Response 38: This issue has been addressed in responses 24, 25 and 32.

Comment 39: This comment reiterates comments made earlier that use of the new asphalt mix mandated by the State of Alaska Department of Transportation will cause opacity violations.

Response 39: This issue has been addressed in **Response 27** and **Response 21**. At the present time 18AAC 50.055(a)(1) and (4) state that visible emissions, excluding condensed water vapor, from an industrial process or fuel burning equipment or an asphalt plant, may not reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. The 20 percent opacity limit is a standard that has been in effect for many years. There would have to be a change made in the regulations if the department were to relax the opacity standard.

Comment 40: Repeats the question concerning the use of an asphalt plant for soil remediation based on the use of the phrase "treated and untreated" soil in the precautions against fugitive dust.

Response 40: This issue has been discussed in response 33.

Comment 41: Mentioned that the term "near" is arbitrary in condition 32a. Feels that distance requirements should be set by local zoning rather than DEC.

Response 41: The issues concerning the use of the word "near" were discussed in response 28. The issue of whether local zoning or DEC should set any separation distances is discussed in response 35.

Comment 42: For crushers states that same comments as made for asphalt plants should apply to crushers especially in terms of fugitive dust and distance requirements to be set by local zoning and not via the general permits.

Response 42: See response 28 and response 35.

The following comments from the State of Alaska Department of Transportation and Public facilities were received late on June 5, 2003, although they were dated June 2, 2003. These comments relate to topics already covered by comments submitted in a timely manner by other entities and are included here for completeness.

Comment 43: The comment advises that the use of recycled asphalt and polymer modified oils on DOT projects will cause increases in opacity from hot mix asphalt plants. DOT suggests that since the use of recycled asphalt reduces waste and that the use of the polymer modified oils results in more durable roadways resistant to rutting and cracking that the increases in opacity and opacity violations should be allowed due to the advantages of using these types of asphalt.

Response 43: This issue has been addressed in **Response 39**, **Response 27** and **Response 21**. At the present time 18AAC 50.055(a)(1) and (4) state that visible emissions, excluding condensed water vapor, from an industrial process or fuel burning equipment or an asphalt plant, may not reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. The 20 percent opacity limit is a standard that has been in effect for many years. There would have to be a change made in the regulations if the department were to relax the opacity standard.

Comment 44: This comment concerns the 330 foot separation distance between an asphalt plant and the nearest inhabited structure. DOT contends that this distance is too large and cannot be met in small villages and specifically mentions Kotzebue as an example. The comment asks for a definition of "near" as it applies to this location situation and suggests that some kind of grandfathering system be set up to accommodate existing plants.

Response 44: All of these issues have already been addressed in responses 22, 28, 34, 41 and 44.

Comment 45: This comment repeats the request for a definition of the word "near" as it relates to the fugitive dust requirements. The statement is made that operators would be "pushed into erring on the safe side, adding cost to the projects."

Response 45: The definition of the word "near" has been addressed in response 28. The "idea of erring on the safe side" adding cost to a project appears to be a reasonable trade off similar to the concept of accepting some increased opacity for better asphalt qualities suggested in Comment 43.

Comment 46: The comment restated the fact that asphalt plants in Alaska usually only operate during the summer months and suggested a change to one annual operating report as making more sense as the dual report system is burdensome and half the reports serve no useful purpose.

Response 46: This comment has been covered in response 31, response 19 and response 23. 18AAC50.350(i)(5)(C) requires that reports must be submitted at least every six months.