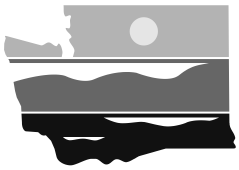

As required by

the Washington State Administrative Procedures Act

Chapter 34.05 RCW

RESPONSIVENESS SUMMARY

REGARDING THE

DRAFT AIR QUALITY PERMIT FOR THE

SABEY'S INTERGATE-QUINCY

DATA CENTER PROJECT

8/24/2011

Publication: 11-02-033

As required by the Washington State Administrative Procedures Act

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RESPONSIVENESS SUMMARY

FOR THE

SABEY'S INTERGATE-QUINCY

DATA CENTER PROJECT

Prepared by:

Washington State Department of Ecology

Air Quality Program

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If you need this publication in an alternate format, please call the Air Quality Program at 360-407-6800. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

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I. Introduction

Sabey's Intergate-Quincy Data Center is proposed to be located at the junction of Road 11 NW and Road O NW in Quincy. Data centers house the servers that provide e-mail, manage instant messages, and run applications for our computers.

Sabey has applied to the Washington Department of Ecology (Ecology) for a permit called a notice of construction (NOC) approval order. An NOC approval order is required before a new source of air contaminants can be built or modified. Its purpose is to protect air quality. The permit is needed because data centers use large, diesel-powered backup generators to supply electricity to the servers during power failures. The primary air contaminant sources at the facility would be 44 electric generators powered by diesel engines. The generators have a power capacity of up to 88 megawatts. The proposed center's three buildings will be phased in over several years, depending on customer demand.

II. Response to Comments

Ecology received both written and oral comments regarding this permit. We want to thank everyone who provided comment for the public record on this topic. But not all testimony generated a response from Ecology. Much of what was received was provided as a statement on the topic, and all comments, including oral and written testimony, are provided verbatim in appendices C and D. In this section we have responded to questions posed throughout the comments received.

Comment 1, Mark and Debbie Koehnen, 11443 Road P NW, Quincy, WA 98848:
I was pouring over the review, looking for insights, and I saw that Sabey resubmitted a proposal on June 3rd with lower emission factors for DEEP. Something about running the generators only during daylight hours will reduce the emissions? How is that possible?

Ecology Response:
Sabey submitted revised emission calculations on June 3, 2011 that proposed using Caterpillar Not-to-Exceed DEEP emission factors rather than nominal DEEP emission factors. Not-to-Exceed emission factors are slightly higher than nominal data since there can be minor variations between the same model engines. Nominal emission factors represent the emission rates the engines should emit at specific loads while the engine is guaranteed to be below not-to-exceed emission factors.

Operating the engines only during daylight hours for scheduled runtimes is required in Preliminary Determination Approval Condition 3.4. Operating during daylight hours does not reduce emissions, but it can reduce impacts since plume dispersion is usually better during the day.

Comment 2, Mark and Debbie Koehnen:

Do Intuit & Yahoo have to run at night because of ozone problems? Won't running during the day create these same problems? Are they running during the day because if they run at night with Intuit & Yahoo, the levels wouldn't be low enough? Are we now getting round the clock exposure to these toxins instead of just in our sleep?

Ecology Response:
Ecology is not aware of Intuit and Yahoo! nighttime emergency generator operations to avoid "ozone problems". Intuit was issued Notice of Construction Approval Order No. 08AQ-E255 for the operation of 9 emergency generators. There are no restrictions on when Intuit can schedule engine operations. Yahoo! was issued Notice of Construction Approval Order No. 11AQ-E399 for the operation of 23 emergency generators. Approval Condition 3.9 restricts maintenance testing to daylight hours. This restriction was placed mainly to avoid operations during hours when atmospheric dispersion is typically poor. Scheduled operations at night by Yahoo! would constitute a violation of their Approval Order.

Comment 3, Mark and Debbie Koehnen:
Also, on page 12, it says 8 hours for emergencies, spread over 2 days? What does that mean? How will the days be divided? Seems like if the power is off for 2 days, they'll run it for 8 hours thinking it will come back on, not give up after 4 hours and wait 24 hours to use up their last 4 hours worth. But then on page 17 under k, it says something about 4 days without power in a given year when they calculate NO2 levels. Can't have it both ways, but is that what is happening?

Ecology Response:
Page 12 of the Sabey Second Tier Review Technical Support Document states that unplanned emergency operation can occur up to 8 hours each year. Based on historical outages in Quincy, it was assumed for modeling purposes that those 8 hours could occur over two separate days. It does not mean that there will be 2 days (48 hours) of power outage. The four days without power contained in k on page 17 refers to a possibility that there may be power outage for some duration on four separate days. It does not mean that there will be four days (96 hours) of power outage.

Comment 4, Mark and Debbie Koehnen:
Also, what happens if procedures are not followed? Is it just a slap on the wrist with a warning, "Don't do that again?" Or is it a minor fine? Or will they be compensating everyone in the valley to help them pay for increased medical expenses due to health problems associated with these toxins that you said would happen in your concluding paragraphs? People with respiratory problems would suffer severe problems, and everyone would suffer in some way, even those in perfect health? Is there anything written into the permit about accounting for hours of generator use? How will this be done to ensure compliance with the permit and allowable hours?

Ecology Response:

Sabey, as well as any other source that has been issued an air quality permit, is required to comply with all applicable regulations and approval conditions. There are very many applicable air quality requirements that a source must follow, and all violations do not result in excess air pollutant emissions. Ecology's response to air quality violations is in proportion to the seriousness of the offence, and whether there are actual excess emissions released. Ecology has a wide array of enforcement actions that range from verbal warnings to large penalty assessments. A violation that resulted in any increase in medical expenses or illness would be treated very seriously. Hours of emergency generator operation is limited in all the data center approval orders. The approval orders also require all the data centers to record and report annual hours of operations. Annual hours of operation can be verified during inspection recording the readings on the non-resettable hours meter required for each engine. A non-resettable hours meter is required for each engine in all the data center approval orders.

Comment 5, Mark and Debbie Koehnen:
I understand that one of the ways the emissions are being 'reduced' is through taller stacks. What happens to the toxins stuck in the stack? Are they belched out of the stack every time a generator is started due to the extra force required to make an engine start running? Do the emissions stick to the sides of the stack? Are the stacks periodically cleaned out and what precautions are in place to avoid spilling those extra thick emissions into the environment?

Ecology Response:
Air contaminant emissions are not "reduced" by extending stack height, but air contaminant impacts can be lessened by greater plume dispersion that can result from extending stack height. Diesel engine exhaust is composed primarily of hot gases with very small amounts of particulate matter. The particulate matter that is entrained in the hot exhaust gases is very small in size, and acts more like a gas than a solid due to Brownian movement. It is unlikely that any appreciable amount of "toxics" will stick to the side of the stack and belch out when the engine is started if the engines are well maintained. When the exhaust gases are released into the ambient air, they are dispersed into the atmosphere. There is very little precipitation of the exhaust gases in the Quincy area.

Comment 6, Mark and Debbie Koehnen:
I talked to a person from DOE and was told in an emergency power outage, the data centers transfer their data to other facilities because the generators are expensive to run. How long does it take to download all that information? With congestion taken into account as all the data centers will be trying to send all their data at the same time over the same lines?

Ecology Response:
Ecology has been told by some of the data centers that data can be transferred in the event of a prolonged power outage. However, none of the data centers have ever provided Ecology with definitive information on how or when data transfer would occur. Since the

possibility of a prolonged power outage in Quincy is believed to be unlikely, the data centers have not included data transfer in their operational plans to Ecology. Ecology has no information on data transfer during a prolonged power outage event.

Comment 7, Mark and Debbie Koehnen:
And am I reading table 6 correctly on page 21, where it says NO2 levels were 173% above the allowable levels to trigger a review and DPM were 1,247% above allowable levels? Wow, that seems like more than significantly over an allowable limit.

Ecology Response:
Table 6 on Page 21 of the Sabey Second Tier Review Technical Support Document compares the worst case modeled ambient concentration of specific air toxic pollutants with their respective Acceptable Source Impact Level (ASIL) as contained in WAC 173-460-150. Both Diesel Engine Exhaust Particulate and nitrogen dioxide exceeded the ASIL, and required Second Tier review. While the modeled concentrations exceeded the ASIL, the modeled impacts were based on worst case operations during worst case meteorological conditions, and were of very limited extent. The possibilities of the impacts being at the levels listed in Table 6 are low, and most of the time the impacts from engine operations are much less.

Comment 8, Mark and Debbie Koehnen:
I thought I read the top down BACT model in the Dell & Sabey reports, but I must have seen it in the Tier 3 reports For Yahoo & Microsoft, where they talked about actual costs and why they weren't cost effective. Why aren't you doing that for these last 2 reports, (Dell & Sabey)?

Ecology Response:
Best available control technology (BACT) is required under new source review, RCW 70.94.152(10), WAC 173-400-113(2). The top down procedure is used to evaluate what control technology constitutes BACT. All new and modified sources of air pollutants are evaluated for BACT, including the Dell and Sabey data centers in Quincy. Best available control technology for the Sabey project can be found on pages 4 – 10 in the Notice of Construction Technical Support Document and in pages 15 – 16 in the Second Tier Review Technical Support Document. Both of these documents can be found on the Ecology Air Quality Program Quincy webpage at http://www.ecy.wa.gov/programs/air/quincydatacenter/index.html. The Dell BACT analysis can also be found in comparable documents on the Quincy webpage.

Comment 9, Mark and Debbie Koehnen:
I am dismayed that in this world of increased technology, where models can be built inside your dispersion model, outdated information is being used for the truck & train emissions. 2005 air reports are being used, which do not take into account the running of the intermodal station. Signs at the crossing on Road P indicate the crossing can be blocked for up to 40 minutes. Diesel train engines idling. Increased truck traffic. Information for how

often and how long the tracks have been blocked as well as the number of semi trucks making pickups at the intermodal should be easily accessible and could be fed into the computerized modeling program just like the other information that was used. Why wasn't this done? Was it because emission levels would have been too high to allow the permit? A numbers game again? Calculations should use up-to-date information if they are to have integrity and value.

Ecology Response:
The 2005 National Air Toxics Assessment was used as there is nothing more recent containing background concentrations of these pollutants at a zip-code level. The Washington Department of Transportation data only contains traffic data for highways 28 and 281 through Quincy. The traffic emissions model used (MOBILE6) implicitly includes idling: the numbers assigned for traffic emissions are typically a mix of emissions expected during in-town running, highway travel, starting and idling. The same argument applies to the railroad data from BNSF. While we recognize there might be some newer sources that are not considered in this analysis, there are also some older, more polluting sources still contained in MOBILE6 that may no longer be operational (example- fleet turnover). Further, a newer on-road traffic model that has since replaced MOBILE6 shows an overall reduction of estimated traffic emissions.

Comment 10, Mark and Debbie Koehnen:
If the computer can make up its own model for the residential properties missing from the map, can't it make up its own model for the extra train & truck emissions? For that matter, aren't the houses that are missing from the outdated map considered surface roughness and therefore affect the movement of the plume?

Ecology Response:
The model does not fill in missing residential properties based on satellite imagery etc. Detailed dimensions of yet-to-be constructed buildings adjacent to the new source must be supplied to the model for calculating downwash. The surface roughness is determined by average land use within each 10-degree sector. A single building will make little difference to the model-utilized surface roughness. If the plume did encounter an obstacle that was not considered in the model, it would typically serve to enhance the plume turbulence slightly, leading to lower-than-modeled concentrations.

Comment 11, Mark and Debbie Koehnen:
I am also dismayed that Celite has not been included in the NOx emissions during an outage. Celite runs on natural gas all year long. They should still be running on natural gas, emitting toxins during an outage, since they do not need generators to produce their power. Besides, doesn't the fact that there is a problem with NOx mean that generators should be modeled for NO2 anytime they run?

Ecology Response:

Celite heats their dryer with natural gas, but operates the dryer with electricity. During a power outage, Celite shuts down their operations, including the dryer, since they have no emergency generating capability. Celite does not burn natural gas during a power outage. Since the nitrogen dioxide NAAQS and the ASIL are both 1 hour standards, the one hour worst case operating scenario with the highest impact was used to evaluate engine operations.

Comment 12, Mark and Debbie Koehnen:
And Sabey says they won't be responsible for any emissions, but charge that to the smaller companies? Are they afraid to be caught holding the smoking gun? If Sabey applies for the permit, seems like they should be held responsible. If they will not be responsible, then a permit should not be issued until the responsible party is ready to step forward. Will Sabey be handling the yearly 48 hours of required maintenance & upkeep on the generators?

Ecology Response:
Sabey will construct the data center, and then lease out space to independent tenants. Each independent tenant will be issued a separate approval order based on the operational parameters established, and evaluations and analysis conducted, in the Preliminary Determination. The independent tenants will be responsible for meeting the conditions and limitations in their individual approval orders. Sabey is responsible for all conditions contained in their approval order until a new approval order is issued to the independent tenant. As Ecology understands the proposed contractual agreements between Sabey and each independent tenant, the independent tenant will be responsible for all scheduled and non-scheduled engine operations and maintenance. Sabey will be responsible for any engines they own and operate.

Comment 13, Mark and Debbie Koehnen:
Also, if Sabey, Yahoo and Intuit are all connected to the same substation, then every time a new tenant installs generators will the substation need to be shut down and generators used as replacement power?

Ecology Response:
Sabey requested, and was evaluated for, 15 hours per year of emergency generator runtime for “electrical bypass”. It is assumed that this is sufficient to replace line power during any substation shutdowns that will be necessary. Ecology does not know whether there will be a scheduled power disruption each time a new generator is installed at each data center.

Comment 14, Mark and Debbie Koehnen:
With the required hours of maintenance for each generator and the extremely large number of generators in the area, can they even run only one generator at a time now, or will companies have to overlap those hours of testing, etc?

Ecology Response:

Approval Condition 1.3 in the Sabey Preliminary Determination requires all of the independent tenants at the Sabey data center to coordinate engine operations to minimize impacts. Ecology will work with all the data centers to make sure that scheduled engine maintenance operations will be spread evenly during daylight hours to minimize multiple engine runtimes. Ecology has found that the level of plume overlap between the northwestern data centers (Microsoft and Dell) and the northeastern data centers (Yahoo!, Sabey, Intuit) is relatively low. We plan to coordinate data center operations separately for the northwestern and northeastern data centers. The number of engines that can operate concurrently at each data center is limited in their respective permits. The Sabey data center will be allowed to run up to 4 engines concurrently during monthly maintenance and load bank testing.

Comment 15, Mark and Debbie Koehnen:
Again, I am extremely concerned that this data center is damaging property costs. How will the Downs family ever be able to sell their property? Who would want to live there in harm's way? When studies show that this is more dangerous to soil and crops, what will become of the fertile agricultural land poisoned by the emissions? People do spend all day outside in an agricultural community, in the fields, working on machinery, so insinuating that won't be the case is a flaw in the permit. Did one of the people who supported the permit step up and offer to do a house swap with the Downs family?

Ecology Response:
If the generators are operated no more than allowed in the permit, lifelong residents of the home at 14994 NW RD 11, Quincy, could have increased DEEP-associated cancer risks attributable to Sabey and the other data centers of no more than 0.0038%. The NO2-associated respiratory tract irritation risk at this residence is not likely to occur more than once about every 70 years.

Ecology doesn't have enough information to assess the possibility the generator exhausts could significantly contaminate the land and crops near the data center. However, the limited evidence available suggests such contamination will not be a problem. Groups of scientists have studied polycyclic aromatic hydrocarbons (PAH) contamination of soil and plants. PAHs are the main toxic chemical contamination in diesel exhaust that can drift through the air until they settle on surfaces. Scientists have studied how these chemicals deposit near roadways that have heavy diesel traffic. One group of scientists tested PAH contamination near a high traffic roadway and found that PAH content of leaf litter, soil, and vegetation declined exponentially with the distance from the roadway, soil depth, and vegetation height.[1] Another group of scientists found higher PAH concentrations in soil samples taken 1 to 8 meters from a highway, but found that soil further from this road (12 to 24 meters) contained only background levels of PAHs.[2] The scientists concluded there is a potential for some of the more toxic PAHs to increase in soil near roads over time, but

1 Pathirana, et al. Ecotoxicol Environ Saf. 1994 Aug;28(3):256-69
2 Johnsen, et al. Environ Sci Technol. 2006 May 15;40(10):3293-8

this is likely to be of low biological significance because the PAHs are tightly stuck to soil particles. It is possible people will swallow dust and plants contaminated with diesel exhaust particles but there is no published reference dose for diesel exhaust particles to compare to the amounts swallowed. Ecology believes inhalation (*i.e*., breathing) is the main way people will be exposed to engine exhaust from the data centers, and has assessed the resulting health risks.

The exposure assessment step of this project's risk assessment focused on how people might be exposed to engine exhaust near the Sabey data center. The exposure assumptions used to calculate health risks included exposure frequency, exposure time, exposure duration and averaging time. Each land-use considered in the assessment had unique exposure assumptions. Based on types of human activity and land-use in the vicinity of Sabey, Ecology considered residential populations of adults and children; on site and neighboring workers and bystanders at Sabey itself, and people who might enter the areas bordering the site. Ecology assumed people living near the data center could be at their residence continuously 24 hr/day for 365 days/yr for 70 years (100 percent of the time). Potential health impacts to offsite workers will vary depending on the worker's schedule at different places, and on the operating times of the data center generators. Ecology assumed people working near the data center could be at their workplace repeatedly for 8 hr/day for 250 days/yr for 40 years. Ecology assumed people entering the highest exhaust impact areas next to the fence around Sabey could be repeatedly exposed for 2 hr/day, 250 days/yr, for 30 years. The zones near Sabey most greatly affected by its DEEP and NO2 emissions are small. Ecology concluded that people living, working and otherwise using these areas would have no conceivable reason for spending greater amounts of time in these places.

Comment 16, Mark and Debbie Koehnen:
Since our Hispanic population is so high in our community, do they have the same rights as the English speaking population? Were the reports and information available in Spanish? How have they been informed of this situation?

Ecology Response:
Because of the demographics in the Quincy area, we made sure to create our hearing outreach materials in both English and Spanish. Our flyers were bilingual, and the newspaper ads were created in both English and Spanish. The Spanish ad was placed in a popular Spanish newspaper, El Mundo, which has a large subscriber rate in Grant County. Please see section three of this document for a full listing of locations and more details on the exact publications and dates of display ads. We also made sure to have a Spanish interpreter present at the hearing.

We did not translate the TSD or draft permit into Spanish because there was not a request to do so. If a Spanish speaking individual were to contact us in the future requesting any of our materials in Spanish, we would do our best to meet that need.

Comment 17, Danna Del Porto, 16651 Road 3 NW, Quincy, WA 98848:
The Sabey Notice of Construction Document has not been available on line for citizen use. I would like an explanation from Ecology as to why information is not readily available to citizens.

Ecology Response:
The Ecology Air Quality Program (AQP) is required to make the information submitted by the applicant, as well as any preliminary determinations, emission analyses, and technical evaluations, available for public inspection in at least one location near the proposed project, Washington Administrative Code 173-400-171(5). We have many documents regarding the project available online, but due to the large size of the Notice of Construction application, coupled with the fact that many of the documents are submitted in multiple iterations and that we are limited by information technology resources to both post and maintain online data, we are not planning to make the application available online. There is no attempt by the AQP to withhold information or to limit public knowledge on any project, and copies of the application were made available at Quincy City Hall, the Department of Ecology office, and are currently available through the public disclosure process.

Comment 18, Danna Del Porto:
I am requesting that Sabey be obligated to install some type of emission control device on the diesel stack. Simply raising the stack is not an adequate method of emission reduction. The stack can be only so high to account for building downwash. The stacks cannot be raised just to reduce emissions. Is the stack height within the guidelines of 42 USC-7423? Sabey has 18 months to construct any additional buildings because the data from the first phase cannot be used in new construction, the data would not be grandfathered in to allow the correlation between stack height and building height.

Ecology Response:
Sabey evaluated various control options for reducing emissions from the diesel engines as part of their BACT analysis. Although several possible technologies exist that can reduce pollutants from Sabey's proposed engines, Ecology found them to be either economically or technically infeasible. The emergency engines proposed by Sabey will comply with EPA's New Source Performance Standards for emergency engines.
http://www.epa.gov/ttn/atw/nsps/sinsps/fr28jn11.pdf.

Please refer to the response to comment 5 in this document for a stack height discussion. Sabey did not raise their exhaust stacks in order to reduce the emissions, but to reduce modeled downwind impacts. This is because modeling was conducted after BACT had been defined. BACT defines the maximum level of emissions in the exhaust. Once BACT is defined, dispersion modeling is then conducted to verify compliance with ambient air quality standards.

Under state rules, applicants are forbidden from using "excess stack height" to meet ambient air quality standards. "Excess stack height" is defined in WAC 173-400-030(31) and WAC 173-400-200(2)(a) as "that portion of a stack which exceeds the greater of: Sixty-five meters, measured from the ground level elevation at the base of the stack; or Hg = H +1.5L."

> "where Hg = "good engineering practice" (GEP) stack height, measured from the ground level elevation at the base of the stack; H = height of nearby structure(s) measured from the ground level elevation at the base of the stack; L = lesser dimension, height or projected width, of nearby structure(s), subject to the proviso below. Nearby," as used in this subsection for purposes of applying the GEP formula means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 kilometer (1/2 mile)."

The exhaust stacks proposed by Sabey comply with regulatory stack height restrictions because they are less than 65 meters, and are also less than the GEP stack height, as calculated according to WAC 173-400-200 (2)(a)(ii).

It is not clear if the statement in the last sentence of this comment refers to construction time limitations contained in WAC 173-400-111(7). The Preliminary Determination for the Sabey project contains construction time restrictions in Approval Condition 2.6 that are based on WAC 173-400-111(7).

Comment 19, Danna Del Porto:
The modeling for this permit is extremely limited in that only a small number of generators are modeled for short periods of time, such as one hour of modeling on a facility that could have hours, if not days, of down time. I would like an explanation of the short modeling time done on the generators for this permit.

Ecology Response:
Ecology understands this question to refer to the few hours that are modeled under the "Monte Carlo" statistical method developed to handle intermittent sources of NO_2. As explained in section 4.3 of the TSD, the first step is to use the AERMOD/PVMRM model for each representative generator runtime regime by each tenant at the Sabey facility. 13 different generator operating regimes proposed by Sabey[3] were each modeled separately with AERMOD, using 5 years of meteorology (2004- 2008; note- this treats each operating mode as though it emits continuously during 43800 hours of varying meteorological conditions).

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3 See Table 5 of the memorandum from Jim Wilder, ICF Seattle, to Greg Flibbert and David Ogulei, Ecology, "Monte Carlo Modeling Analysis for NO2-NAAQS, Sabey-Intergate Data Center, Quincy WA". April 14, 2011. File: "Sabey-Quincy-Monte-Carlo-NO2-Analysis_Final-4-14-2011.doc"

However a particular operating mode is only likely to emit for a few hours each year. As we do not know which of the 43800 hours a particular mode is likely to operate during, there is a need for a method to randomly "expose" these intermittent emissions to a range of different meteorological conditions. This process randomly chooses the days on which emissions occur (i.e. 8 hours of power outages are expected to occur on a total of 4 separate days, so the algorithm randomly picks 4 days of the year) and locates the modeled concentrations on those days. It then aggregates the impacts from all operating modes on each of the respective randomly chosen days and calculates the 98^{th} percentile thereof. Repeating the randomized day-selection 1000 times and aggregating all modes gives a distribution of the 98^{th} percentiles at each receptor. The median 1000 iterations of the 98^{th} percentiles is considered as a robust estimate of the NO_2 1-hour impacts.

Comment 20, Danna Del Porto:
2011 has seen huge amounts of snow in the Columbia River drainage. This amount of snow is not reliable. The wind power contribution has made the balance of hydro and winds a complex and volatile magic act for power managers to control. The summer energy demand will rise with population increases and summer is the most stressful for energy production. I mention these facts to raise the question of a long-term electrical shortage due to grid damage, solar storms or just human error in energy transmission patterning. The Sabey technical document acknowledges these disrupting factors to their electrical supply yet DOE does not appear to take those facts into consideration and require filters on the stacks. I want an explanation of why the possibility of long-term electrical disruption does not trigger the requirement for filters on the diesel stacks. Will the data center keep to their limit on fuel and operating limits in case of a long-term electrical outage?

Ecology Response:
The Northwest has seen wide variations in the amount of precipitation over the last couple decades that have affected our hydropower system. Climate change, variations in annual precipitation, and increased demand may certainly stress future power supplies. Local power suppliers are aware of these factors, and plan accordingly to maintain reliable power supplies. It is unrealistic to assume that stress to local power supplies will immediately result in increased outages. As we experienced in 2000 and 2001, stress on regional power supplies resulted primarily in power cost increases. Future improvements to local power distribution systems and changing technologies, as well as cost increases, should help mitigate future stress on local power supplies.

Sabey will be required to comply with all permit limits regardless of any assumptions they made in their Notice of Construction application. Regardless of whether or not changes occur in the supply of power, Sabey will be obligated to follow the conditions of their permit. These conditions include an annual fuel limit and limits on the number of hours each engine can operate. If they violate these conditions, they will be subject to enforcement under applicable laws and regulations.

Comment 21, Danna Del Porto:
I want a statement from the Washington State Department of Ecology that the Director and all of the engineers have considered the possibility of conditions that might require hours, if not days, of generator run time and I am requesting an iron-clad guarantee that the permits granted to these data centers will be honored and never violated. I believe that DOE has a legal responsibility to provide safety to citizens and, in the case of Quincy air quality, DOE cannot know that future generator run time will be safe for my community.

Ecology Response:
Please consider the final Notice of Construction approval order (if and when issued) as a statement from the Director and the permit team that the Sabey data center can operate safely and will be protective of health for the residents of Quincy. The Ecology Director delegates authority to his section managers to sign approval orders, and a Professional Engineer is required to sign a Notice of Construction approval order to verify the technical review and analysis. It is Ecology's responsibility to review the information submitted in the Notice of Construction application, and to make sure the information is accurate and complete. The conditions in the approval order are enforceable under state law, and Ecology has broad enforcement authority. Ecology will use the full extent of its authority to make sure that permit conditions are followed, and that the residents of Quincy are protected.

Comment 22, Danna Del Porto:
How has Sabey resolved the wastewater discharge issue with the City of Quincy? I have heard that the wastewater from the data center cooling towers will be spread on the lawns for Mt. View School, Monument School and Lauzier Park. Is this correct? What concrete data can you show me and the residents of Quincy that this water spreading is safe and environmentally positive? If this water is so safe why not apply it to farm fields? One option for wastewater discharge was to run that water into the Bureau of Reclamation Irrigation canal. Is this solution still an option? In discussion a plan was proposed to run the water downhill into the Columbia River. Is this still an option for wastewater discharge?

Ecology Response:
This public comment period and responsiveness summary addresses Air Quality permitting issues only. For information regarding water and wastewater issues please contact the City of Quincy and/or the Department of Ecology Water Quality and Water Resources Programs (509) 329-3400.

Comment 23, Danna Del Porto:
How many gallons of water will be used by Sabey over the course of one year? What is the source of your water? If the water is from the Quincy wells is that a legal use of city water? Do you have a State permit to withdraw this much water annually? Do you have a permit to discharge this much water annually?

Ecology Response:
This public comment period and responsiveness summary addresses Air Quality permitting issues only. For information regarding water and wastewater issues please contact the City of Quincy and/or the Department of Ecology Water Quality and Water Resources Programs (509) 329-3400.

Comment 24, Danna Del Porto:
How much power will Sabey require to operate the entire project, all phases? Do you have any specific arrangement with Grant PUD regarding the source of power, the rate of power or the long-term supply of power?

Ecology Response:
For purposes of air quality permitting, Ecology only reviewed equipment that was subject to pre-construction air permitting. Because only the diesel engines were subject to air permitting, Ecology only asked Dell to supply information on the gross power output from the proposed diesel engines. We did not ask for information on the power needs of the other portions of the facility. Ecology believes that knowledge of whether or not the facility will need more power than the diesel engines can supply in a power emergency is not pertinent to the current permitting action.

Comment 25, Danna Del Porto:
Did you have any contacts with the Grant County Economic Development Council regarding your choosing Quincy for your company development? Do you have contacts with the Port of Quincy regarding your choosing Quincy for construction? Did you receive any concessions or promises from the City of Quincy for building here? Has Sabey ever donated to any public official in Grant County for their election to office? Does such a donation constitute a conflict of interest?

Ecology Response:
This public comment period and responsiveness summary addresses Air Quality permitting issues only. Because this question is not within the purview of Ecology, we have no answer to this question.

Comment 26, Danna Del Porto:
Have you taken advantage of the tax incentives offered by the State of Washington for choosing the build in Quincy? Does this tax incentive require you to have a specific number of employees to provide local jobs? How many local people have been hired to work on the Sabey construction? Which local suppliers have been used to provide materials or labor in construction? How many people are expected to be employed in the final build-out of Dell?

Ecology Response:

This public comment period and responsiveness summary addresses Air Quality permitting issues only. Because this question is not within the purview of Ecology, we have no answer to this question.

Comment 27, Danna Del Porto:
I am asking for a statement from the Director of the Washington State Department of Ecology that he has considered all of the negative aspects of the diesel generators in Quincy and that he will instruct his staff to adjust the Sabey permit to require diesel emissions controls. I am further requesting that all future construction in Quincy that involves diesel emissions must have controls as part of the permit. My understanding is that the Director has this authority and I believe all of us involved in the Quincy situation know that emissions controls are the "right thing" to do.

Ecology Response:
Although the Director has overall authority over actions taken by the Department of Ecology, the authority to permit new sources of air pollution has been delegated to the Air Quality Program. In some cases, the director is directly involved in making risk management decisions (i.e., third tier review). In this case, the Air Quality Program was tasked with making decisions regarding emission control technology.

Comment 28, Patricia Anne Martin, 617 H Street SW, Quincy, WA 98848:
Sabey's NOC support document indicated that the facility would have 38 ft. stacks and emissions would result in 18 cancers per million, constituting a Third Tier review. Rather than require controls to reduce emissions, Ecology instead allowed Sabey to raise the stacks to 48 ft. reducing the number of cancers to 6 resulting in a Second Tier review.
As I understand the Clean Air Act, elevating stacks is a prohibited dispersion technique as defined under 42 USC 7423 because it does not result in emissions reduction, only the illusion of emissions reduction. If elevating stacks were a permissible form of emissions reduction, then industry could simply circumvent the Clean Air Act entirely by proposing tall enough stacks to stay under screening levels such as ASILs; forego the need for a permit entirely, and reduce the need for Ecology.

But the Congressional intent of the Clean Air Act is prevention of air quality problems through reduction, or elimination where possible, of toxic emissions. Elevating stacks achieves neither of these preventative objectives. If you disagree with my assessment please explain why and also provide justification for elevating the stacks at Sabey.

Ecology Response:
The original Notice of Construction application submitted January 4, 2011 by Sabey proposed 38 foot engine exhaust stack heights, and resulted in a cancer risk from DEEP at the nearest residence (referred to as the NE home or MIRR) of approximately 9 per million over a lifetime of exposure. The final project that was evaluated in the Technical Support Document for Second Tier Review dated June 22, 2011 contained 48 foot engine exhaust stack heights that resulted in a cancer risk from DEEP at the nearest residence (referred to

as the NE home or MIRR) of approximately 6 per million over a lifetime of exposure. The Sabey project was Second Tier applicable since cancer risk from the project did not exceed 10 per million, WAC 173-460-090(7).

Please refer to the response to comments 5 and 18 in this document for a discussion on increasing engine exhaust stack height and its possible effects on air contaminant impacts.

Comment 29, Patricia Anne Martin:
I object to all of the changes that Sabey has proposed in the draft permit and encourage Ecology to retain the language in the draft permit, including all protections, testing, engine operational limits and notifications. Additionally, I object to Sabey's replacement of the word "dry" cooling system to a "wet" system that utilizes recycled/treatment wastewater. This is not acceptable. Non-water vapor is subject to the Clean Air Act and must be modeled. If this change is included in the permit I will expect to see modeling of its affect on secondary formation of PM2.5; modeling of the contaminants found in the cooling water, and a re-opening of the comment period so that the community has an opportunity to review and comment on the new findings.

Ecology Response:
Before Ecology issued the Preliminary Determination on June 27, 2011 for Sabey's project, Ecology shared draft documents with Sabey dated April 12 and May 9, 2011. The purpose of sharing those draft documents was to make sure that Ecology fully understood the Sabey project, and that Sabey fully understood the scope of restrictions that would be placed on the project. A large part of the permitting process is back and forth between Ecology and the applicant, and the process is considered collaborative. However, a collaborative process does not mean that changes made to draft permit language constitutes relaxation of applicable state and federal air quality requirements.

Ecology learned that independent tenants may elect to install cooling systems during a meeting with Sabey on May 19, 2011. Sabey submitted information on the cooling systems on June 23 and 24, 2011, and that information was evaluated and added to the NOC Technical Support Document in Section 6.4.6. The amount of particulate matter was calculated from the cooling systems, and was considered $PM_{2.5}$. The $PM_{2.5}$ was modeled and found to contribute less than 1 ug/m^3 to the 24 hour $PM_{2.5}$ ambient air concentrations. Total $PM_{2.5}$ ambient concentrations remained below the NAAQS 24 hour threshold of 35 ug/m^3 at approximately 27 ug/m^3. The Preliminary Determination contains Approval Condition 3.6 that addresses cooling system emission limitations expressed as maximum drift rate. The cooling systems that have been proposed by Sabey have been fully addressed by Ecology, and information on the cooling systems was available for public review while the public comment period was open.

Comment 30, Patricia Anne Martin:
When asked at the public hearing which data centers are on the same substation as Sabey, the response provided by Mr. Sasser was that only Yahoo! shared the substation. This is

incorrect. Both Intuit and Yahoo! receive power from the same substation as Sabey. My question pertains to modeling during power outages. Were the emissions from Yahoo! and Intuit included in the modeling for Sabey's power outage?

Ecology Response:
Yes, Yahoo! and Intuit emissions were included in the Sabey modeling.

Comment 31, Patricia Anne Martin:
Microsoft and Yahoo! were required to model a "worse-case scenario" of a 48 hour power outage. Why was Sabey allowed to model only eight 1-hour outages? What do emission concentrations look like (they were 18 cancers under this scenario) if a "worse case" was a 48 hour outage?

Ecology Response:
All facilities are required to model emissions as proposed in their respective NOC applications. Sabey wants to operate during 8 hours of outage per year, while Microsoft and Yahoo requested 48 hours per year. Besides, Sabey's 8 hours of outages were spread over 4 days, potentially resulting in high NO_2 levels on all 4 days (recall the NO_2 standard is based on the maximum hourly concentration measured during an entire day). Microsoft and Yahoo spread their 48 hours over 2 days. Any engine operation beyond the NOC limits would be noncompliant with the permit and be subject to enforcement actions.

Comment 32, Patricia Anne Martin:
Sabey claims the need for switchgear and transformer maintenance every 2-3 years, which I interpret as the need to connect new tenants to the power supply, i.e., "utility feed swap". When Microsoft conducted their "utility feed swap" it required 99 hours with all 22 generators running. What modeling was done to represent the various "swaps" that must occur to connect 8 tenants? Was the "switchgear and transformer maintenance" modeled, and if so, what were the assumptions, i.e., how many engines running for what length of time?

Ecology Response:
Sabey did not indicate that any "feed swaps" will be required when the future tenants sequentially tie into the electrical system. Therefore, the allowable runtime limits listed in Table 3.2 of the Approval Order do not include this action by the future tenants. As described in Sabey's permit application submittals, the generic term "electrical bypass" includes two independent actions:
1) "Main switchgear maintenance". Once every three years the main switchgear electrical system on each of the three data center buildings will require maintenance. During this triennial maintenance, all generators in that building must be activated at their power-outage loads for roughly 2 hours.
2) "Transformer Maintenance". Once every three years on a randomly rotating schedule, each individual tenant will maintain the electrical transformer inside their leased tenant

space. During this triennial maintenance, each tenant will operate 2 of their generators at power outage load for approximately 13 hours in a single event.

Sabey modeled each of these two transformer maintenance tasks as follows:

- Long-term DEEP cancer risk. Every generator was assigned 15 hours/year, every year, 3-year rolling average, at 75% load.
- 24-hr PM2.5 NAAQS (worst-case screening analysis). The maximum screening event was modeled to include Main Switchgear Maintenance at Building B, all 16 generators in Building B, for 2 hours/day, 365 days/year, and the 1st-highest 24-hr average was compared to the NAAQS.
- 1-hr NO2 (Monte Carlo analysis). In any single year the following were assumed to occur: 1 of the 3 buildings was assumed to conduct its triennial Main Switchgear Maintenance (16 generators in Building B at 75% load, 1 day/year, operating all day); 4 of the 8 tenants were assumed to conduct their triennial Transformer Maintenance (each of the four tenants operates 2 generators, 75% load, 1 day/year each tenant, all day).

Comment 33, Patricia Anne Martin:
I object to allowing Sabey to use Tier II engines, when Tier IV are available and are required for non-emergency engines. Sabey's engines won't be installed until the grace period ends in 2012, so there is no excuse to not require the cleaner Tier IV engines. Sabey acknowledged in the NOC Support Document that their engines are for "nonemergency" purposes (see Summary document handed in during Public Hearing).

Ecology Response:
The generators at the Quincy data centers will meet the definition of emergency stationary internal combustion engines under the federal regulations. Note that the EPA has revised 40 CFR 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines that includes changes to the definition of emergency engine. Under the revision, the EPA is allowing up to 50 hours per year of non-emergency operation.

Comment 34, Patricia Anne Martin:
Ecology intends to require a simplified NOC review with each tenant. I request that Ecology require an NOC application and review for each tenant, i.e., "owner or operator" of a new source, to assure compliance with air quality regulations as they exist at the time of application. This will prevent tenants from being "grandfathered" into less stringent regulations.

Ecology Response:
Sabey will construct the data center, and then lease out space to independent tenants. Each independent tenant will be issued a separate approval order based on the operational parameters established, and evaluations and analysis conducted, in the Notice of Construction approval order. The independent tenants will be responsible for meeting the

conditions and limitations in their individual approval orders. Sabey will be responsible for any engines they own and operate.

Ecology has required all engines that are installed to meet current federal standards at the time of installation in Approval Condition 2.1 of the Preliminary Determination. Approval Condition 2.4 specifies that any engine installed after July 1, 2014 will require notification, and will be evaluated to determine if new source review (NSR) is warranted. The primary criteria to determine NSR applicability will be whether there are any emission increases over what was allowed in the original permit, and whether BACT has changed since the project was first approved.

Comment 35, Patricia Anne Martin:
I request that as part of the permit terms, language be added that the tenants notify Ecology in the event of a merger with any of the other tenants. In this way "circumvention" is not a factor.

Ecology Response:
Circumvention is a concept that refers to a project being permitted in parts to avoid triggering specific regulatory requirements. Sabey is proposing to permit their entire project, and is constructing the three buildings in phases. WAC 173-400-111(7)(c) allows for limited phased construction of a project. Approved phases of a project must commence construction no later than eighteen months after the approved dates in the final permit. Sabey and its independent tenants will not be circumventing any applicable air quality regulatory requirements by simply "merging" tenants. The Preliminary Determination does not restrict the number of generators to be installed at any time as long as the total number of generators is less than 44.

Ecology will likely consider each independent tenant to be a separate source of air emissions that will require registration under WAC 173-400-099, Registration program. Ecology will maintain contact with each of the independent tenants at the Sabey data center under the Registration Program, and will be made aware of any changes to independent tenants.

Comment 36, Patricia Anne Martin:
In defense of not using control technologies as BACT, Sabey states through ICF that they "reviewed EPA's RACT/BACT/LAER Clearinghouse" but were unable to find "recently permitted NOx controls on internal combustion engines". This argument falls on deaf ears. ICF, specifically Jim Wilder, worked on the permitting of Titan data center in Moses Lake, as did many of the Ecology staff. Titan's use of two-stage oxidation catalysts will reduce NO by up to 35% as guaranteed by the manufacturer. ICF's failure to submit the information to the RBLC, and Ecology's recent removal of the requirement to submit the information, is a great disservice to communities across the country.

Ecology Response:

Comment 36 is a statement regarding the use of best available control technology (BACT) and utilization of the EPA RACT/BACT/LAER Clearinghouse. Sabey is proposing to utilize BACT to minimize air contaminant emissions for their project. Only major sources are required to report BACT determinations to the RBLC. When Ecology revised Chapter 173-400 WAC, effective April 1, 2011, the regulation that requires submittal of major source control technology information to the EPA RACT/BACT/LAER Clearinghouse was moved from section 110(7) to 111(5) during the revision. The Sabey project, as well as the Titan project in Moses Lake, are not major sources, and the control technology determinations for those projects were not forwarded to the EPA RACT/BACT/LAER Clearinghouse.

Comment 37, Patricia Anne Martin:
Sabey has requested to delay the requirement for installation of the first 12 engines past July 2012. State regulations require construction take place within 18 months unless there is a justifiable reason for an extension. I object to any extension past the 18 months.

Ecology Response:
The statement in this comment appears to refer to construction time limitations contained in WAC 173-400-111(7). The Preliminary Determination for the Sabey project contains construction time restrictions in Approval Condition 2.6 that requires engine manufacture and installation by January 1, 2014. This is the installation date for the last engine. The first engine must be installed within 18 months of final permit issuance. Sabey may request an extension for cause of this condition.

Comment 38, Patricia Anne Martin:
Sabey claims to require 1½ hours per engine per month for testing. The original request was for 1 hour per month. Why did this change? What is the justification for longer hours of testing?

Ecology Response:
Sabey submitted a change in engine runtimes on April 6, 2011 that was dated March 22, 2011. This submittal included increasing monthly testing from 1 hour per month to 1.5 hours per month for each engine. Ecology assumed that Sabey revised engine runtime based on project re-evaluation. Ecology's responsibility is to review the project, and project revisions sometimes occur during application review.

Comment 39, Patricia Anne Martin:
Ecology has acknowledged in two of the past three public hearings that there is a problem with NO2 in Quincy. If scrubbers or two-stage oxidation catalysts had been required for Sabey what kind of reduction in NO2 would be seen? If DPM filters had been required – as they are in California – what would be the total cancers expected from DPM from Sabey at the 38 ft and 48 ft stack heights?

Ecology Response:

According to the Sabey Notice of Construction, use of Selective Catalytic Reduction devices on Sabey's emissions could have controlled up to 95% of NO2, whereas use of Two-Stage Oxidation Catalyst devices might have controlled up to 70% of NO2. These claims are at the high ends of their estimated ranges, actual control effectiveness of these devices might be lower. The Two-Stage Oxidation Catalyst devices that were installed at the Titan data center in Moses Lake are expected to reduce NO2 emissions by 35%.

Since 38 foot stacks weren't part of the final Sabey project application, estimates of pollutant concentrations resulting from stacks that high weren't included in the final health risk assessment Ecology reviewed. Ecology reviewed the health risk assessment of the project as specified in the final proposal (48-ft high stacks). This assessment covered the average DEEP concentration that could result from 48-ft stacks. At the place likely to have the highest increased cancer risk from Sabey (the northeast residence) the risk to occupants could be 5.83 in one million. The use of diesel particulate filters have been reported to control up to 85% of DEEP. If such devices were used on Sabey's emissions, and were 85% efficient, the resulting increase in cancer risk for the dwelling's occupants could be as low as 0.87 in one million. Because there are so few people in the area around Sabey that is significantly affected by its DEEP emissions, and because the increased risk of cancer in the area is at most 5.83 per million, no additional cancer cases attributable to Sabey are likely in the conceivable future.

Comment 40, Patricia Anne Martin:
Gary Palcisko modeled a 2-day outage forecast for 3 data centers and raised the question of the need for an emergency plan. How has that modeled 2-day outage changed with the addition of 2 more data centers?

Ecology Response:
As part of the third tier analysis of the Yahoo! Phase 5 expansion[4], Ecology modeled NO2 emissions during simultaneous power outage from nearby existing data centers (i.e., Microsoft and Intuit) and proposed data centers (i.e., Yahoo! Phase 5 and proposed changes to Phases 1-3, Dell, and Sabey).

This model assumed continuous simultaneous outage emissions for all data center engines for all of 2005 meteorological year. It also assumed that each engine operates at loads specified in permits (for existing data centers) or permit applications (for those data centers not yet permitted). The model also included potential emissions from nearby Celite Corporation.

Because this model included emissions from Dell and Sabey, the modeled results presented in the Yahoo! third tier technical support document have not changed.

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4 See: http://www.ecy.wa.gov/programs/air/quincydatacenter/docs/Yahoo_Tier3_TSD_2-8.pdf

Comment 41, Patricia Anne Martin:
In the event of a catastrophic event, e.g., sustained power grid failure due to solar storm or dam breach, that causes long-term power loss in excess of the permit terms, will the data centers be allowed to continue to operate? If so, under what authority? If so, at what point would the air in community be unsafe to breathe?

Ecology Response:
Data center air quality permitting in Quincy is based on reasonable power supply assumptions by the electrical service providers. Catastrophic events that result in sustained power disruption cannot be anticipated, and are not covered in the data center Notice of Construction approval orders. However, the data centers in Quincy will be required to comply with all permit limits regardless of changes that may occur to the power supply.

Comment 42, Patricia Anne Martin:
How can ecology process an NOC application for a landlord, i.e., not an "owner or operator" of a source?

Ecology Response:
Sabey will construct the data center, and then lease out most of the space to independent tenants. Each independent tenant will be issued a separate approval order based on the operational parameters established, and evaluations and analysis conducted, in the Notice of Construction approval order. However, Sabey is the owner of the data center, and will be responsible for any Notice of Construction approval order issued to them.

Comment 43, Patricia Anne Martin:
Under what authority can Ecology waive Sabey's liability?

Ecology Response:
Ecology is not waiving Sabey's responsibility or liability. Please see responses to comments 12, 34, and 42 for more information on construction and operation of the data center.

Comment 44, Patricia Anne Martin:
Were notices of the comment period and public hearing mailed out to households in Quincy in both Spanish and English?

Ecology Response:
No. Direct mailing to every household in the Quincy area is a very large expense, one that we feel is not justified for the taxpayers to be responsible for. We have already gone above and beyond the required public notice by placing multiple display ads, in both English and Spanish, in a total of 4 newspapers. We also posted flyers that were bilingual (English and Spanish) in multiple public locations. Please see section three of this document for a full listing of locations and more details on the exact publications and dates of display ads.

Comment 45, Patricia Anne Martin:
Did any of the notices or articles or other media announcements talk about the risks to the community from the operation of the diesel generators and/or the number of generators to be operating in Quincy? Did they talk about the public's influence on the process? Please attach all notices to your response.

Ecology Response:
The Ecology AQP took the issue of community risk very seriously, and adopted a community wide approach to risk for the data center projects. We assigned an Ecology risk communicator to help us better explain risk to the community from the data center projects. However, locating all "risk" language in our transcripts and documents falls outside our statutory obligations for identifying public records (WAC 44-14-04002).

Comment 46, Patricia Anne Martin:
Please cite any federal statute or federal regulation that uses 100 cancers per million as a standard for air quality.

Ecology Response:
The federal Clean Air Act does not establish an acceptable risk level for exposure to toxic air pollutants. The federal clean air act mandated that the U.S. EPA establish emission standards for hazardous air pollutants to protect public health with an "ample margin of safety." The Act did not state what risk level constitutes an "ample margin of safety." It was during rule making for the benzene National Emission Standard for Hazardous Air Pollutants (NESHAP) that the U.S. EPA established a numeric risk value that constitutes an "ample margin of safety":

*"[I]n protecting public health with an ample margin of safety, we strive to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately 1-in-1 million; and (2) limiting to no higher than approximately1-in-10 thousand [i.e., **100 in a million**] the estimated risk that a person living near a facility would have if he or she were exposed to the maximum pollutant concentrations for 70 years."*

In developing standards for classes of industrial sources, EPA aims to prevent a single facility's emissions from increasing the maximally exposed receptor's lifetime cancer risk by more than 100 in one million. It should be noted that EPA does not interpret this level as a "rigid line" for making risk management decisions.

In Quincy, Ecology aims to keep the maximum individual's increased risk from exposure to cumulative emissions of diesel engine exhaust (from multiple sources, both stationary and mobile) to less than 100 in one million.

Comment 47, Patricia Anne Martin:

Has the City of Quincy had – at any time -- the right to impose more stringent air pollution standards and/or require emission controls?

Ecology Response:
This is a question for the City of Quincy attorney or other legal counsel. However, the City of Quincy does not have authority under the Washington Clean Air Act to either implement or enforce air quality laws and regulations. Ecology does not know the City of Quincy's scope of authority to enact air quality requirements under its existing legal authorities.

Comment 48, Patricia Anne Martin:
Please clarify what the following statement from the NOC Support Document dated December 2010 page 2-1 means: "Description of AERMOD air quality dispersion modeling, demonstrating that the installation of the three backup generators complies with NAAQS..." Were only three engines modeled?

Ecology Response:
The statement on page 2-1 of the December 2010 Notice of Construction Support Document of "three backup generators" is an editorial error, and should have stated "forty-four backup generators". Forty-four engines were modeled to determine ambient air impacts.

Comment 49, Patricia Anne Martin:
Washington's Clean Air Act requires a worst case scenario when modeling for NAAQS compliance. Please explain how modeling at 100% load for NOx is not required.

Ecology Response:
Potential to emit, WAC 173-400-030(73), is used to calculate maximum emissions from an air pollution source, and those emissions are used to determine compliance with the NAAQS. Potential to emit is the maximum capacity a source has to emit under its physical and operational design taking into account any air pollution control equipment or restrictions on operations that are in effect under a federally enforceable order. Sabey has requested operating restrictions below 100% operational capacity that will be placed in the Notice of Construction approval order and is federally enforceable.

Comment 50, Patricia Anne Martin:
Was any real time monitoring conducted in consideration of this permit? If so, where were the monitors located?

Ecology Response:
No real time ambient air monitoring was conducted to collect data for this project. Although ambient air monitoring was not conducted in connection with any particular permit, we did monitor ozone (O_3) for two summers in Quincy. This helped refine the assumed O_3 background down from the previously estimated 60 parts per billion (ppb) (estimated by interpolating modeled data with data collected at other sites throughout the state), to 40 ppb. The monitor is located at the Quincy Municipal Airport.

Comment 51, Patricia Anne Martin:
I am curious as to at which point in the process a toxicologist gets involved with the permit? Is it after the modeling has been conducted or before? Do you have a say on the inputs or trust that the inputs are correct? Have you participated in all the permits issued in Quincy, or just in Sabey? Are toxicologists familiar with modeling requirements under the law?

Ecology Response:
The lead engineer usually informs the toxicologist about an application once an applicant/consultant has disclosed that their modeling of TAP concentrations from a proposed source shows one or more ASIL concentrations could be exceeded. The Toxicologist relies on the Ecology modelers and lead engineer to verify that the correct inputs were used by the applicant's modeler, and that the outputs were reported accurately. The Ecology modelers are experts on the utilization of the models and the modeling software. The lead engineer is considered the expert regarding the project, and verifies both BACT and emissions before the applicant-conducted modeling is accepted. Although the Ecology toxicologists are familiar with modeling procedures and how to fully utilize modeling data, they rely on the other Ecology modeling and engineering experts to verify data.

Ecology management assigns a toxicologist (normally Gary Palcisko or Matt Kadlec) to review the health impact assessment for a project that requires either Second Tier or Third Tier review. Besides the Sabey project, Matt Kadlec was assigned to review the health impact assessments for the Microsoft and Yahoo's 2007 applications. Gary Palcisko was assigned to review the Microsoft and Yahoo expansion projects and the Dell and Intuit Projects. The assignments are based on workload. The toxicologists may collaborate on any project they are assigned.

Comment 52, Patricia Anne Martin:
Danna Dal Porto and I have assumed that you are one of the senior toxicologists so we were both surprised when you were assigned to this project as Sabey being more remote isn't the greatest threat to Quincy, and it seems a less complicated permit than the others. Having you come in now and say everything is okay, implies that the all the data center operations -- including the 5 hours per day generator runtime every day of the year that will be necessitated by 141 engines positioned around Quincy -- previously permitted are also okay.

Ecology Response:
The AQP managers responsible for final decisions on the data center applications do not assign toxicologists based solely on the complexity of the project. Please see the response to Comment 51 above for more information on toxicologist assignments.

Although the toxicologists may collaborate on assigned projects, neither toxicologist has reviewed all the data centers in detail. However, Ecology has studied the cumulative data

center DEEP-associated risks and found that the additional risk is less than 50 per million anywhere in Quincy. The peak risk could occur in a residentially zoned area where there are no houses built yet near Dell and Microsoft. Other areas in and near Quincy will have less additional cancer risk because concentrations are estimated to be lower or people are less likely to be exposed.

Available information indicates NO_2 emissions from the data centers will rarely reach harmful levels. As long as hours of operation in the NOC Approval Orders are not exceeded, the data center won't raise NO_2 concentrations in the Quincy area significantly. After examining all the data centers together, the evidence indicates that people who are unusually sensitive to nitrogen oxides will suffer temporary irritation-induced airway reactivity if they are in an overexposed area during unfavorable air dispersion conditions coincident with simultaneous full-load operation of multiple data center generators. When generator exhaust concentrations reach the highest levels, and if unusually sensitive people are in an affected area, their respiratory impairment should be transient and stop once their exposure diminishes. Over time, repeated exposures to nitrogen oxides from all the testing and other usage of the 141 generators may result in worsening of asthma symptoms. Moderate adverse effects may become more likely. This is why coordinated engine testing between Quincy's data centers is especially important. Considering how diesel exhaust levels in Quincy compare with levels that exist in urban areas of Washington, it's reasonable to conclude that severe life-threatening effects of NO2-triggered asthma symptoms are very unlikely to develop in Quincy residents. The risks of diesel exhaust-associated heart attacks and certain other serious particulate matter-associated health problems are even less likely.

Comment 53, Patricia Anne Martin:
Has anyone modeled the 5 hours of generator runtime needed everyday that I mentioned above, and have they also modeled it with maintenance or other runtime added to it? You do know that only the testing of the engines is coordinated?

Ecology Response:
Yes they were modeled. The statistical technique developed to model intermittent NO_2 emissions from multiple sources from multiple facilities combines all individual operating scenarios. The area-wide DEEP background model run considers yearlong emissions from all operating scenarios at all facilities named above.

Comment 54, Patricia Anne Martin:
Has anyone modeled the downtime from Yahoo that will be required to install generators at Sabey? As I mentioned, Microsoft was down for 99 hours running 22 generators non-stop while the "utility feedswap" occurred for the additional 13 engines.

Ecology Response:
Modeling was conducted (by Yahoo!) that resulted in the annual operating limits contained in Notice of Construction Approval Order No. 11AQ-E399 issued to Yahoo! on March 28,

2011. Ecology is unaware whether the Yahoo! data center will experience power disruption when Sabey engines are installed, or whether the “utility feedswap” will be necessary at the electrical substation that services the northeastern data centers. However, Yahoo! is approved to operate their engines for up to 36 hours for scheduled electrical bypass.

Comment 55, Patricia Anne Martin:
Was the 30 hrs initialization required for each engine over a 5 day period (x 12 engines) modeled? Modeled with influences from Yahoo, Celite and Intuit?

Ecology Response:
Yes they were modeled. The statistical technique developed to model intermittent NO_2 emissions from multiple sources from multiple facilities combines all individual operating scenarios. The area-wide DEEP background model run considers yearlong emissions from all operating scenarios at all facilities named above.

Comment 56, Patricia Anne Martin:
Was the intermodal transportation center with all the locomotives modeled?

Ecology Response:
Please refer to the response to Comment 9.

Comment 57, Patricia Anne Martin:
Appendix W of 40 CFR 51 requires that "all sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration for emission limits should be explicitly modeled". This would also include existing engines at facilities that are expanding. I am not aware of any "explicit modeling", only the use of "background".

Ecology Response:
Please see Table 14 in the TSD and footnotes. The “background” was a separate model run that encompassed all of Quincy and included all known DEEP sources. These were all sources contained in EPA’s National Air Toxics Inventory from 2005, two highways (281 and 28), BNSF, Microsoft, Yahoo and Intuit emissions. Dell emissions were not included, because the easternmost portion of their grid was about one mile west of the nearest Sabey receptor. This concentration is the highest among the grid points in the easternmost portion of their grid.

III. Summary of public involvement opportunities

A. Summary of public involvement opportunities for this permit:

1. A legal ad with information on the draft permit, associated public hearing and comment period was placed in the Columbia Basin Herald on June 28, 2011.

2. On June 29, 2011, Ecology issued a press release to all news media--radio, TV, and newspapers—in Adams, Douglas, Franklin, Grant, Lincoln and Spokane counties.

3. Display ads inviting people to the hearing were published in the Quincy Valley Post Register on July 21 and 28, 2011, the Wenatchee World on July 22, 27, 29 and 31, 2011, and in the Columbia Basin Herald on July 22, 27, 29 and August 1, 2011. A Spanish version of the same display ad was placed in the East Edition of El Mundo, a Washington State Spanish newspaper. The ad ran in El Mundo July 21 and 28, 2011.

4. Information was available on Ecology's on-line public calendar.

5. Flyers advertising the hearing in both Spanish and English were posted at several locations in the community during the week of July 4-8, 2011. The flyers were posted by Ecology staff at the following locations:

- Tacos Jalisco, 22 C St SW, Quincy
- Akins Grocery, 106 F St. SW, Quincy
- Quincy Library, 108 B St. SW, Quincy
- St. Pius Catholic Church, 805 Central Ave. N, Quincy
  (note: Presbyterian and Nazarene churches did not have someone at the church when we came by)
- Quincy Aquatic Center, 724 F St. SE, Quincy

6. On June 29, 2011, an e-mail reminder of the hearing and comment period was sent to all those on the listserv of interested parties for Quincy data centers—about 100 people. A second e-mail reminder was sent to the same listserv one week before the hearing, on July 27, 2011.

IV. Appendices

A. Individuals and Organizations Providing Comments

B. List of Public Comment Submittals

C. Copies of All Written Comments

D. Hearing Transcript and Oral Comments

E. Public Notices

F. Technical Support Document

G. Final Permit

Appendix A
Individuals and Organizations Providing Comments

Document Number	Name and Affiliation	Comment Number(s)
1	Mark and Debbie Koehnen	1 - 16
2	Danna Dal Porto	17 - 27
3	Patricia Anne Martin	28 - 57
4	Gloria Schulz	
5	Pete Horn	
6	William C. Smith	
7	Genevieve Hayes	
8	Terry Brewer	
9	David Dowler	
10	Penny Gates	
11	Patrick Gallatin	
12	Patrick Boss	

Appendix B
List of All Public Comment Submittals

1. Mark and Debbie Koehnen, 11443 Road P NW, Quincy, WA 98848. Written comments submitted in e-mail dated August 8, 2011, 9:58 PM.
2. Danna Dal Porto, 16651 Road 3 NW, Quincy, WA 98848. Written comments submitted in e-mail dated March 21, 2011, 4:31 PM.
3. Patricia Anne Martin, 617 H Street SW, Quincy, WA 98848. Oral comments given as testimony, written comments submitted in e-mails dated August 4, 2011, 10:01 AM, and August 8, 2011, 8:23 PM.
4. Gloria Schulz, 1000 13th Ave. SW Apt. 8, Quincy, WA 98848. Written comments, dated August 6, 2011.
5. Pete Horn, digitdeep@ifiber.tv. Written comments submitted in e-mail, dated July 28, 2011, 10:29 AM.
6. William C. Smith, Central Washington Building Trades Council, 71105 N. 225 PRNE, Benton City, WA. Written comments submitted at hearing.
7. Genevieve Hayes, jykhy@nwi.net. Written comments submitted in e-mail, dated August 8, 2011, 8:24 PM.
8. Terry Brewer, Grant County Economic Development Council, 6594 Patton Blvd., NE, Moses Lake, WA. Oral comments given as testimony, written comments submitted on August 4, 2011.
9. David Dowler, 700 6th Ave. SE, Quincy, WA 98848. Oral comments as testimony.
10. Penny Gates, IBEW. Oral comments as testimony.
11. Patrick Gallatin, 10114 2nd Pl. SE, Lake Stevens, WA 98258. Oral comments as testimony.
12. Patrick Boss, Port of Quincy, 202 G St. SE, Quincy, WA 98848. Oral comments as testimony.

Appendix C
Copies of All Written Comments

1. Dear Kendra:

I'm commenting on the draft permit for the Sabey Integrate-Quincy Data Center. I was unable to attend the meeting due to prior commitments, but I oppose the draft as it is written and seek answers to some questions pertaining to the permit.

I was pouring over the review, looking for insights, and I saw that Sabey resubmitted a proposal on June 3rd with lower emission factors for DEEP. Something about running the generators only during daylight hours will reduce the emissions? How is that possible? It seems like this is just a numbers game, where someone plays with the statistics until they find a way to have the numbers just below the really toxic levels where you'll have to deny the permit or make the companies take extra precautions to protect the public & community. Do Intuit & Yahoo have to run at night because of ozone problems? Won't running during the day create these same problems? Are they running during the day because if they run at night with Intuit & Yahoo, the levels wouldn't be low enough? Are we now getting round the clock exposure to these toxins instead of just in our sleep?

Also, on page 12, it says 8 hours for emergencies, spread over 2 days? What does that mean? How will the days be divided? Seems like if the power is off for 2 days, they'll run it for 8 hours thinking it will come back on, not give up after 4 hours and wait 24 hours to use up their last 4 hours worth. But then on page 17 under k, it says something about 4 days without power in a given year when they calculate NO2 levels. Can't have it both ways, but is that what is happening? Also, what happens if procedures are not followed? Is it just a slap on the wrist with a warning, "Don't do that again." Or is it a minor fine? Or will they be compensating everyone in the valley to help them pay for increased medical expenses due to health problems associated with these toxins that you said would happen in your concluding paragraphs? People with respiratory problems would suffer severe problems, and everyone would suffer in some way, even those in perfect health? Is there anything written into the permit about accounting for hours of generator use? How will this be done to ensure compliance with the permit and allowable hours?

I understand that one of the ways the emissions are being 'reduced' is through taller stacks. What happens to the toxins stuck in the stack? Are they belched out of the stack every time a generator is started due to the extra force required to make an engine start running? Do the emissions stick to the sides of the stack? Are the stacks periodically cleaned out and what precautions are in place to avoid spilling those extra thick emissions into the environment?

I talked to a person from DOE and was told in an emergency power outage, the data centers transfer their data to other facilities because the generators are expensive to run. How long does it take to download all that information? With congestion taken into account as all the

data centers will be trying to send all their data at the same time over the same lines? I know my computer runs much more slowly when the lines are congested.

And am I reading table 6 correctly on page 21, where it says NO2 levels were 173% above the allowable levels to trigger a review and DPM were 1,247% above allowable levels? Wow, that seems like more than significantly over an allowable limit.

I thought I read the top down BACT model in the Dell & Sabey reports, but I must have seen it in the Tier 3 reports For Yahoo & Microsoft, where they talked about actual costs and why they weren't cost effective. Why aren't you doing that for these last 2 reports, (Dell & Sabey)?

I am dismayed that in this world of increased technology, where models can be built inside your dispersion model, outdated information is being used for the truck & train emissions. 2005 air reports are being used, which do not take into account the running of the intermodal station. Signs at the crossing on Road P indicate the crossing can be blocked for up to 40 minutes. Diesel train engines idling. Increased truck traffic. Information for how often and how long the tracks have been blocked as well as the number of semi trucks making pickups at the intermodal should be easily accessible and could be fed into the computerized modeling program just like the other information that was used. Why wasn't this done? Was it because emission levels would have been too high to allow the permit? A numbers game again? Calculations should use up-to-date information if they are to have integrity and value.

If the computer can make up its own model for the residential properties missing from the map, can't it make up its own model for the extra train & truck emissions? For that matter, aren't the houses that are missing from the outdated map considered surface roughness and therefore affect the movement of the plume?

I am also dismayed that Celite has not been included in the NOx emissions during an outage. Celite runs on natural gas all year long. They should still be running on natural gas, emitting toxins during an outage, since they do not need generators to produce their power. Besides, doesn't the fact that there is a problem with NOx mean that generators should be modeled for NO2 anytime they run?

And Sabey says they won't be responsible for any emissions, but charge that to the smaller companies? Are they afraid to be caught holding the smoking gun? If Sabey applies for the permit, seems like they should be held responsible. If they will not be responsible, then a permit should not be issued until the responsible party is ready to step forward. Will Sabey be handling the yearly 48 hours of required maintenance & upkeep on the generators? Also, if Sabey, Yahoo and Intuit are all connected to the same substation, then every time a new tenant installs generators will the substation need to be shut down and generators used as replacement power? New laws will come into effect. We're playing catch up with these emissions. New tenants should have to abide by the new laws, not be grandfathered into lesser precautions. An example of this is that Microsoft and Yahoo had to model for a 48 hour power outage, and now we're down to 8 hours for Dell & Sabey, and Sabey's has to be spread over 2

days. With the required hours of maintenance for each generator and the extremely large number of generators in the area, can they even run only one generator at a time now, or will companies have to overlap those hours of testing, etc?

Again, I am extremely concerned that this data center is damaging property costs. How will the Downs family ever be able to sell their property? Who would want to live there in harm's way? When studies show that this is more dangerous to soil and crops, what will become of the fertile agricultural land poisoned by the emissions? People do spend all day outside in an agricultural community, in the fields, working on machinery, so insinuating that won't be the case is a flaw in the permit. Did one of the people who supported the permit step up and offer to do a house swap with the Downs family? Actions speak louder than words. Many people supporting these permits do not live within the affected area, so won't be exposed to these emissions. They are pocketing profits from the data centers and letting other accept the risks.

Since our Hispanic population is so high in our community, do they have the same rights as the English speaking population? Were the reports and information available in Spanish? It's like legal or medical translations - not just anybody can do it because of all the technical language involved, so you need to be qualified in order to translate. I was thinking of people and parents who might want to know what was happening, then I realized I probably don't have enough Spanish myself to even explain this to them! How have they been informed of this situation?

A famous saying has come to mind recently: Live each day to it's fullest, as if it's your last day on earth, but plan like you're going to live forever. I'm worried that too many are living for today only, and not planning adequately for the future. Please hold these companies to a higher standard so our quality of life isn't compromised. Olympia required diesel oxidation catalysts (DOCs) and Moses Lake required a 2-phase oxidation catalyst guaranteed to remove substantial DPM and NO2. Because these technologies have been used they are therefore "economically and technically feasible." Please require better precautions for our health, now & into the future.

Thank you for your consideration.
Debbie Koehnen
Mark Koehnen
Fiona Koehnen
Ellie Koehnen
Residents, 11443 Road P NW, and landowners of agriculturally zoned land directly impacted by this permit
Beth Miracle
Brooke Thomsen
Landowners of agriculturally zoned land directly impacted by this permit

2. August 6, 2011

Department of Ecology

4601 N. Monroe
Spokane, Washington 99205

This is my public statement regarding the permit for the Sabey data center complex in Quincy, Washington.

Submitted by:

Danna Dal Porto
16651 Road 3 NW
Quincy, WA 98848

Sir,

This Sabey statement contains some of the same questions as the Dell statement I submitted on July 11, 2011. The Dell Responsiveness Summary has yet to be presented to the public so I do not have answers to my questions. The staff from the Department of Ecology has more time to respond to citizen questions than citizens have to formulate questions based on the close timing of the data center public hearings.

I have followed the data center construction in Quincy since 2010. The more I learn the more I am convinced that the correct course of action to protect my community is for some kind of emission control device be placed on the diesel emission stacks. At this point, I believe that Ecology has determined that no control devices will be required no matter how compelling the evidence is to require controls. Several different Ecology engineers, experts in this field, have recommended controls for other Quincy data centers and each and every time the experts have been ignored. A supposed "community wide" approach has been instituted to provide community protection. I do not believe that this approach is going to protect Quincy. I believe the "community wide "approach is going to allow construction of data centers until a huge number of cancers are permitted with no concern for the more dangerous emissions that cause cardiopulmonary and respiratory disease. These decisions are being made as if the town of Quincy were a science experiment instead of a community of hard-working residents who did not ask to be invaded by highly technical industry. The trade-off in local jobs has not happened. In this instance, the industry gets the profits while we get the cancer, strokes and heart attacks.

Ecology has a double standard. The Olympia data center has emission controls and the Titan data center in Moses Lake has emission controls. The location of the Quincy data centers directly affects more individuals in their homes and at work that either one of these other data centers. Ecology's answer when asked about emission controls is that controls are not cost effective. At the same time, Ecology has exempted all of the hours of initialization and pre-operational testing from the permit limitations. Hours and hours of run time (without controls) is being allowed to spill toxic emissions over Quincy. Then Ecology says that the diesel engines only operate for one hour a month. That is not true if one knows that hard facts about the ins-and-outs of the permitting process. The permitting process is designed to favor industry at the

expense of local residents. To have 141+ diesel generators, without controls, in one small rural community is not ethical and I do not care how much the controls cost; controls are necessary for Quincy to have any kind of quality of life.

Ecology is moving ahead with the Quincy data centers because there is no one to stop them. The Governor, Director of Ecology, State legislators and Quincy City Administrators and Council members have all agreed that building data centers in Quincy is the best action for the State of Washington. These individuals have set a price on the health of Quincy residents and Quincy children and that price is the taxes collected from these industries.

I want the record to show that I object to the construction of data centers in Quincy without benefit of diesel emissions controls as an unethical and unprofessional act by the Washington State Department of Ecology. Ecology has traded emission controls for reduced fuel consumption, adjusted engine load and reduced run times. Ecology states that this is an environmental benefit for the State of Washington and that reducing all of these functions is the "best available control technology" (tBACT). I disagree with their conclusions and believe that control devices are the only way to have these industries in Quincy and have the industries operate safely for everyone.

These are my concerns:

1. The Sabey Notice of Construction Document has not been available on line for citizen use. I would like an explanation from Ecology as to why information is not readily available to citizens. I have been out of town and I could not view the document at the Quincy City Hall or drive to Ecology's office in Spokane. I believe this lack of available documents looks like a deliberate effort to stifle citizen knowledge of the Sabey data center permit. Without knowledge, I cannot make a well-researched public statement about my concerns regarding the Sabey facility.

2. I have studied the data center construction models and I feel that the Sabey data center is flawed in that there is no way for a resident of Quincy to determine that the developer is operating inside the permitted guidelines for emission controls. The generators are to be run on limited fuel and run times as well as reduced engine power. Without access to operational records, I cannot determine if the operator of the generators is in compliance with the DOE permit. Because of this flaw in the permit from the Washington State Department of Ecology, I object to a permit allowing Sabey to operate this data center.

3. I am requesting that Sabey be obligated to install some type of emission control device on the diesel stack. Simply raising the stack is not an adequate method of emission reduction. The stack can be only so high to account for building downwash. The stacks cannot be raised just to reduce emissions. Is the stack height within the guidelines of 42 USC-7423? Sabey has 18 months to construct any additional buildings because the data from the first phase cannot be used in new construction, the data would not be grandfathered in to allow the correlation between stack height and building height.

4. Reliability of Power: Although the electrical power from Grant Public Utility District has been considered very reliable, information is available that shows the increase in demand plus the variances in weather patterns will place serious stress on this reliable power. I am pointing out that the weather information used as the basis for the modeling is weather information from Moses Lake, Washington. Moses Lake does not have the "valley" affect that Quincy experiences. There is a reason this is called the Quincy Valley. The Monument Mountains to the north affect the weather patterns to a great extent so using Moses Lake as a weather basis is terribly flawed. Just this one fact should invalidate the modeling formulas used in the Sabey permit. I am appealing the Sabey permit on the basis that the weather data is from the wrong source therefore the findings are incorrect. I am requesting the Sabey modeling be done again with the correct weather source.

The Sabey technical support document acknowledges the power supply uncertainty. In spite of their own concern over the future of power, DOE has still not required filters on the stacks. The modeling for this permit is extremely limited in that only a small number of generators are modeled for short periods of time, such as one hour of modeling on a facility that could have hours, if not days, of down time. I would like an explanation of the short modeling time done on the generators for this permit.

2011 has seen huge amounts of snow in the Columbia River drainage. This amount of snow is not reliable. The wind power contribution has made the balance of hydro and winds a complex and volatile magic act for power managers to control. The summer energy demand will rise with population increases and summer is the most stressful for energy production. I mention these facts to raise the question of a long-term electrical shortage due to grid damage, solar storms or just human error in energy transmission patterning. Information on solar storms is available on line from numerous sources. This is the link from the Chicago Tribune:http://www.chicagotribune.com/business/sns-rt-us-utilities-noaa stre7746ua-20110805,0,668013.story. The Sabey technical document acknowledges these disrupting factors to their electrical supply yet DOE does not appear to take those facts into consideration and require filters on the stacks. I want an explanation of why the possibility of long-term electrical disruption does not trigger the requirement for filters on the diesel stacks. Will the data center keep to their limit on fuel and operating limits in case of a long-term electrical outage?

As another possibility for electrical interruptions is an event in 2001. In 2001, the Bonneville Power Administration implemented a program that resulted in a payment program to stop farmers from using water and, as a result, saved as much as 15% on the electrical power required to pump the water into the Columbia Basin Irrigation System. This program was enacted as a response to a very low snow pack in the Columbia River System. The changing weather patterns indicate the possibility for this disrupted water supply (and lower electrical generation) to, perhaps, be more frequent. The energy supply is not a constant and DOE must entertain the possibility that the data center diesel generators will need to be run many more hours than is being considered in their permit. It is obvious that the best action to follow in the case of Quincy is to place emission controls on the diesel stacks and then the industry, Ecology,

the PUD and residents can be assured that the health of the community is protected and the generators can run as necessary. I want a statement from the Washington State Department of Ecology that the Director and all of the engineers have considered the possibility of conditions that might require hours, if not days, of generator run time and I am requesting an iron-clad guarantee that the permits granted to these data centers will be honored and never violated. I believe that DOE has a legal responsibility to provide safety to citizens and, in the case of Quincy air quality, DOE cannot know that future generator run time will be safe for my community.

5. How has Sabey resolved the wastewater discharge issue with the City of Quincy? The limit has been reached on wastewater treatment for data centers by City facilities and yet the City of Quincy keeps extending the opportunity for data center construction without adequate infrastructure. I have heard that the wastewater from the data center cooling towers will be spread on the lawns for Mt. View School, Monument School and Lauzier Park. Is this correct? What concrete data can you show me and the residents of Quincy that this water spreading is safe and environmentally positive? The wastewater is concentrated and, at least in one case, the water has been treated with chemicals. I believe you would be doing this during the part of the year that children would be using these lawns. I cannot see that this is a good long-term solution. If this water is so safe why not apply it to farm fields? One option for wastewater discharge was to run that water into the Bureau of Reclamation Irrigation canal. Is this solution still an option? In discussion a plan was proposed to run the water downhill into the Columbia River. Is this still an option for wastewater discharge?

6. How many gallons of water will be used by Sabey over the course of one year? What is the source of your water? If the water is from the Quincy wells is that a legal use of city water? Do you have a State permit to withdraw this much water annually? Do you have a permit to discharge this much water annually?

7. How much power will Sabey require to operate the entire project, all phases? Do you have any specific arrangement with Grant PUD regarding the source of power, the rate of power or the long-term supply of power?

8. Did you have any contacts with the Grant County Economic Development Council regarding your choosing Quincy for your company development? Do you have contacts with the Port of Quincy regarding your choosing Quincy for construction? Did you receive any concessions or promises from the City of Quincy for building here? Has Sabey ever donated to any public official in Grant County for their election to office? Does such a donation constitute a conflict of interest?

9. Have you taken advantage of the tax incentives offered by the State of Washington for choosing the build in Quincy? Does this tax incentive require you to have a specific number of employees to provide local jobs? How many local people have been hired to work on the Sabey construction? Which local suppliers have been used to provide materials or labor in construction? How many people are expected to be employed in the final build-out of Dell?

10. I have recently learned that the ultimate decision about diesel emissions and control devices rests totally with the Director of the Department of Ecology. That is a huge responsibility and a terribly important decision because of the long-range implications of the decision, especially if the decision is continued not to require control devices. Quincy has been selected as a city to be monitored in the National Children's Health Study. As part of this Study, the air will be monitored to see the effects that local industry and agriculture have on young children. I bet the Quincy test will be interesting with the Microsoft and Dell facilities just up wind of the pre-school/K-2 elementary school. Sabey, Intuit and Yahoo! are also affecting children who live east of town, especially in the Lazy Acres housing. All 327 children in Mountain View school (preschool to grade 2) will be affected each and every school day with diesel exhaust and when most of these children go home they live in town and get more exhaust emissions at their home. I do not understand why the Director of the Department of Ecology would not require emission controls on these diesel stacks. Ecology admits that it has never permitted this many industrial generators in one small area therefore an arbitrary limit of cancers has been set to provide some protection. I have to say that this looks like a guess by Ecology as to how to proceed and that emission controls must be installed for these 141+ generators instead of just guessing about public safety. I am asking for a statement from the Director of the Washington State Department of Ecology that he has considered all of the negative aspects of the diesel generators in Quincy and that he will instruct his staff to adjust the Sabey permit to require diesel emissions controls. I am further requesting that all future construction in Quincy that involves diesel emissions must have controls as part of the permit. My understanding is that the Director has this authority and I believe all of us involved in the Quincy situation know that emissions controls are the "right thing" to do.

I am emailing this document to Ecology because I was unable to attend the Sabey public hearing. After talking to persons at the Sabey meeting, I am complementing the organizers of the meeting for being professional and focused to the task on hand, educating the public about air quality issues. The choice of room is poor and I still think the city of Quincy has better places to hold meetings than the room over the council chambers. I think it is interesting that the two latest announced meetings are on Wednesday night. Rural Washington communities reserve Wednesday nights for church night and no one schedules meetings for Wednesday night because of that conflict. I cautioned Greg Flibbert from the Spokane DOE office, before the Dell meeting, not to choose a Wednesday night for a public hearing but my comments were ignored.

Thank you for considering my comments and my questions.

Danna Dal Porto
16651 Road 3 NW
Quincy, WA 98848
(509)785-2380

Department of Ecology
4601 N. Monroe
Spokane, Washington 99205

RE: Sabey

Dear Mr. Flibbert:
I am writing to object to the issuance of an air quality permit to Sabey Intergate for a variety of reasons, including the lack of emission controls necessary for meaningful reduction of DPM and NO2. For the ease of referencing my objections I am resorting to numbering them. They are as follows:

1. Sabey's NOC support document indicated that the facility would have 38 ft. stacks and emissions would result in 18 cancers per million, constituting a Third Tier review.
Rather than require controls to reduce emissions, Ecology instead allowed Sabey to raise the stacks to 48 ft. reducing the number of cancers to 6 resulting in a Second Tier review. As I understand the Clean Air Act, elevating stacks is a prohibited dispersion technique
as defined under 42 USC 7423 because it does not result in emissions reduction, only the illusion of emissions reduction. If elevating stacks were a permissible form of emissions reduction, then industry could simply circumvent the Clean Air Act entirely by proposing tall enough stacks to stay under screening levels such as ASILs; forego the need for a permit entirely, and reduce the need for Ecology.

But the Congressional intent of the Clean Air Act is prevention of air quality problems through reduction, or elimination where possible, of toxic emissions. Elevating stacks achieves neither of these preventative objectives. If you disagree with my assessment please explain why and also provide justification for elevating the stacks at Sabey.

2. I object to <u>all</u> of the changes that Sabey has proposed in the draft permit and encourage Ecology to retain the language in the draft permit, including all protections, testing, engine operational limits and notifications. Additionally, I object to Sabey's replacement of the word "dry" cooling system to a "wet" system that utilizes recycled/treatment wastewater. This is not acceptable. Non-water vapor is subject to the Clean Air Act and
must be modeled. If this change is included in the permit I will expect to see modeling of its affect on secondary formation of PM2.5; modeling of the contaminants found in the cooling water, and a re-opening of the comment period so that the community has an
opportunity to review and comment on the new findings.

3. When asked at the public hearing which data centers are on the same substation as Sabey, the response provided by Mr. Sasser was that only Yahoo! shared the substation. This is incorrect. Both Intuit and Yahoo! receive power from the same substation as Sabey. My question pertains to modeling during power outages. Were the emissions from Yahoo! and Intuit included in the modeling for Sabey's power outage?

4. Microsoft and Yahoo! were required to model a "worse-case scenario" of a 48 hour power outage. Why was Sabey allowed to model only eight 1-hour outages? What do emission concentrations look like (they were 18 cancers under this scenario) if a "worse- case" was a 48 hour outage?

5. Sabey claims the need for switchgear and transformer maintenance every 2-3 years, which I interpret as the need to connect new tenants to the power supply, i.e., "utility feed swap". When Microsoft conducted their "utility feed swap" it required 99 hours with all 22 generators running. What modeling was done to represent the various "swaps" that must occur to connect 8 tenants? Was the "switchgear and transformer maintenance" modeled, and if so, what were the assumptions, i.e., how many engines running for what length of time?

6. I object to allowing Sabey to use Tier II engines, when Tier IV are available and are required for non-emergency engines. Sabey's engines won't be installed until the grace period ends in 2012, so there is no excuse to not require the cleaner Tier IV engines. Sabey acknowledged in the NOC Support Document that their engines are for "non- emergency" purposes (see Summary document handed in during Public Hearing).

7. Ecology intends to require a simplified NOC review with each tenant. I request that Ecology require an NOC application and review for each tenant, i.e., "owner or operator" of a new source, to assure compliance with air quality regulations as they exist at the time of application. This will prevent tenants from being "grandfathered" into less stringent regulations.

8. I request that as part of the permit terms, language be added that the tenants notify Ecology in the event of a merger with any of the other tenants. In this way "circumvention" is not a factor.

9. In defense of not using control technologies as BACT, Sabey states through ICF that they "reviewed EPA's RACT/BACT/LAER Clearinghouse" but were unable to find "recently permitted NOx controls on internal combustion engines". This argument falls on deaf ears. ICF, specifically Jim Wilder, worked on the permitting of Titan data center in Moses Lake, as did many of the Ecology staff. Titan's use of two-stage oxidation catalysts will reduce NOx by up to 35% as guaranteed by the manufacturer. ICF's failure to submit the information to the RBLC, and Ecology's recent removal of the requirement to submit the information, is a great disservice to communities across the country.

10. Sabey has requested to delay the requirement for installation of the first 12 engines past July 2012. State regulations require construction take place within 18 months unless there is a justifiable reason for an extension. I object to any extension past the 18 months.

11. Sabey claims to require 1 ½ hours per engine per month for testing. The original request was for 1 hour per month. Why did this change? What is the justification for longer hours of testing?

12. Ecology has acknowledged in two of the past three public hearings that there is a problem with NO2 in Quincy. If scrubbers or two-stage oxidation catalysts had been required for Sabey what kind of reduction in NO2 would be seen? If DPM filters had been required – as they are in California – what would be the total cancers expected from DPM from Sabey at the 38 ft and 48 ft stack heights?

Additional questions I have that I would like to have answered:

1. Gary Palcisko modeled a 2-day outage forecast for 3 data centers and raised the question of the need for an emergency plan. How has that modeled 2-day outage changed with the addition of 2 more data centers?
2. In the event of a catastrophic event, e.g., sustained power grid failure due to solar storm or dam breach, that causes long-term power loss in excess of the permit terms, will the data centers be allowed to continue to operate? If so, under what authority? If so, at what point would the air in community be unsafe to breathe?
3. How can ecology process an NOC application for a landlord, i.e., not an "owner or operator" of a source?
4. Under what authority can Ecology waive Sabey's liability?
5. Were notices of the comment period and public hearing mailed out to households in Quincy in both Spanish and English?
6. Did any of the notices or articles or other media announcements talk about the risks to the community from the operation of the diesel generators and/or the number of generators to be operating in Quincy? Did they talk about the public's influence on the process?
Please attach all notices to your response.
7. Please cite any federal statute or federal regulation that uses 100 cancers per million as a standard for air quality.
8. Has the City of Quincy had – at any time -- the right to impose more stringent air pollution standards and/or require emission controls?
9. Please clarify what the following statement from the NOC Support Document dated December 2010 page 2-1 means: "Description of AERMOD air quality dispersion modeling, demonstrating that the installation of the three backup generators complies with NAAQS..." Were only three engines modeled?
10. Washington's Clean Air Act requires a worst case scenario when modeling for NAAQS compliance. Please explain how modeling at 100% load for NOx is not required.
11. Was any real time monitoring conducted in consideration of this permit? If so, where were the monitors located?

I remain concerned that Ecology continues to foster an environmental injustice in Quincy; has shown no environmental benefit under the issuance of this permit and continues to degrade the quality of our air shed. 42 USC 7470 states that the general purpose of the New Source Review is to protect human health and welfare while "insuring that economic growth will occur in a manner consistent with the preservation of existing air resources." Setting a standard of 100 cancers per million equates to allowing degradation of our air shed (after all, if there was no degradation there would be no increased cancer risk), and Ecology's knowing disregard for this Congressional directive.

In addition to today's comments, I have also provided verbal comments at the Public Hearing and supporting documentation, and have also asked several questions of Matt Kadlec via email that I have been assured will be answered during the responsiveness summary.

Finally, I have attached an electronic copy of Dr. Ranijit Sahu's Declaration for your use in the responsiveness summary. It was made part of public record at the hearing during my comments, and as I mentioned then, many of the same issues raised in the declaration are also issues in the Sabey permit.

Thank you for a midnight deadline.
Sincerely,
Patricia Anne Martin
MYTAPN
617 H St. SW Quincy, WA 98848

From: Patty Martin [mailto:martin@nwi.net]
Sent: Thursday, August 04, 2011 10:01 AM
To: Kadlec, Matthew (ECY)
Subject: Quincy

Matt,

Thank you for coming to the meeting last night. I was nice to put a face to documents I've been reading for the past year.

I am curious as to at which point in the process a toxicologist gets involved with the permit? Is it after the modeling has been conducted or before? Do you have a say on the inputs or trust that the inputs are correct? Have you participated in all the permits issued in Quincy, or just in Sabey? Are toxicologists familiar with modeling requirements under the law?

Danna Dal Porto and I have assumed that you are one of the senior toxicologists so we were both surprised when you were assigned to this project as Sabey being more remote isn't the greatest threat to Quincy, and it seems a less complicated permit than the others. Having you come in now and say everything is okay, implies that the all the data center operations --

including the 5 hours per day generator runtime every day of the year that will be necessitated by 141 engines positioned around Quincy -- previously permitted are also okay.

I raised a few questions last night about modeling and would appreciate your looking into them.

1. Has anyone modeled the 5 hours of generator runtime needed everyday that I mentioned above, and have they also modeled it with maintenance or other runtime added to it? You do know that only the testing of the engines is coordinated?
2. Has anyone modeled the downtime from Yahoo that will be required to install generators at Sabey? As I mentioned, Microsoft was down for 99 hours running 22 generators non-stop while the "utility feedswap" occurred for the additional 13 engines.
3. Was the 30 hrs initialization required for each engine over a 5 day period (x 12 engines) modeled? Modeled with influences from Yahoo, Celite and Intuit?
4. Was the intermodal transportation center with all the locomotives modeled?
5. Appendix W of 40 CFR 51 requires that "all sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration for emission limits should be explicitly modeled". This would also include existing engines at facilities that are expanding. I am not aware of any "explicit modeling", only the use of "background".

Thank you.

Patty

4. Quincy, Wash
August 6, 2011

Dear Sir,

I was unable to attend the public hearing held here in Quincy concerning the hazardous emissions from generators of the Sabey Corp. There is already such poor air quality in our area that putting more questionable substances bothers me. I have breathing problems and must use many medications already. I think we have enough – please don't add any more suspected harmful factors to our air.

Thank you for your help.

Sincerely,
Gloria Schulz

5. To: Department of Ecology
Attn: Kendra Robinson-Harding

I hope your agency has recognized the 'fact' that it is but a very small group of radicals led by a woman with a long track record of being 'way out there' with her preaching's. I can only hope that your agency has figured her out for what she is. These data centers will help our county and the idea of scrubbing them over such a thing as emissions from their standby generation facilities is preposterous.

One has to only examine the fact that every hospital, telephone facility, many cold storage facilities and a whole host of others, who have critical power needs, have had such back up power for years. I have not heard a single case presented where there are any substantiated examples of the doom and gloom that this woman and her small contingent predict will fall upon mankind, from these generators. It leads me to believe there is narcissism with this woman's rantings of doom and gloom. She actually likes to hear herself babble, getting attention and creating her notoriety as a bonus. Please observe her ranting and look at her "data" with a skeptical eye as each is conjured up to fuel 'HER' fire and create personal fame. Wow!

Best regards,
Pete Horn.....Grant County resident 46 years

6. Good Afternoon, Mayor & City Council Members:

My name is William Smith. I am the Vice President of the Central WA Building & Construction Trades Council. I really appreciate the opportunity to give public comment on the permitting issues surrounding the data centers on behalf of our council.

Our council is representative of 13 International Building & Construction Trades Unions with a combined membership of over 13,000 members in Central WA. Over the past 2 years our industry unemployment rate has reached as high as 50% and still is nearly 30% in several areas.

The data centers have been a blessing to the industry and to our hard working tradesman who build them. The data center projects currently underway have produced thousands of family wage jobs which now total nearly 600,000 hours of work combined. These jobs have saved hundreds of families on the brink of losing their homes, provided tradesman with health insurance, and have stimulated the region’s economy.

To date, the data center tax relief bill that was passed has really been the only producer of good, quality construction jobs in Washington State. No other tax relief incentive as provided this scale of jobs that support hard working American families.

I would implore the City Council to pass through all permitting for all data center projects in the Quincy area. I would also implore the City Council and local economic development council to actively pursue more industrial projects in your jurisdiction. Our member’s families and livelihoods depend on these projects in this difficult economic time.

Once again, I sincerely appreciate your time and the opportunity to address you today.

William C. Smith
Central WA Building Trades Council
71105 N. 225 PRNE
Benton City, WA

7. Dept. of Ecology;

I am concerned about the effects of there being so many diesel generators in total so close to Quincy. It is not so much the statistics on increased cancers due to the diesel emissions, but general effects on breathing and the circulatory system that worry me. Many of us may have asthma, COPD, or other conditions that make us even more vulnerable to these emissions. There are many elderly and many children in our community, those who are apparently most vulnerable to the toxic diesel particulate matter.
These generators are not simply run in emergencies, but as I understand it run monthly to maintain them in working order. If we must have this many generators in such a small area, so near our population, I would prefer that these generators have filters, or whatever is the very highest level of protection for our citizens. If it would be helpful to us if they are only operated for maintenance reasons when there is sufficient air movement to disperse these particles as much and as quickly as possible, then, I would hope that would be a requirement for their operation.
Please carefully consider our community in giving out these permits, now, and in the future.

Thank you for your time,

Genevieve Hayes

8. August 4, 2011

Mr. Greg Flibbert
Eastern Regional Office, Air Quality Program
Washington State Department of Ecology
4601 N. Monroe St.
Spokane, WA 99205

RE: Comments in support of the Department of Ecology's proposed "Notice of Construction" order for the Sabey Center in Quincy, Washington

Dear Mr. Flibbert:

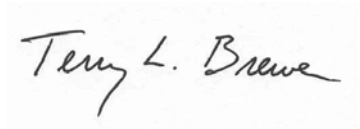
I am writing to comment in support of the Department of Ecology's proposed Notice of Construction Approval Order No. 11AQ-E4XX.

As someone without a scientific background, I appreciate the hard work and study that you and your staff perform when examining permit applications on behalf of the State of Washington.

As a 14 year resident of Grant County and a 5th year Commissioner at Grant County Public Utility District I can speak with knowledge about the redundancy and reliability of the electric grid in Grant County. While it is true that outages are not unheard of, it is also true that they are generally of a very short nature, particularly those on the transmission system. The multiple transmission circuits that serve the power substations in the Quincy area allow for line sectionalizing and rerouting of energy around line faults to restore service in short order when line faults do occur.

While the number of data centers in Quincy is growing, we have seen a significant reduction of run time of diesel generators for routine test purposes at existing data centers. I know that your department staff have evaluated the impacts of the new Sabey Data Center diesel generators and I trust your departments methods of analysis and your conclusions. Thank you for your work.

Sincerely,



Terry L. Brewer
Executive Director

Appendix D
Hearing Transcript and Oral Comments

Lindsay Blain: Let the record show it is 7:03 PM on August 3, 2011, and this hearing is being held at the Quincy City Hall in Quincy, Washington. This hearing is on Sabey's proposed new data center in Quincy.

Legal notice of this hearing was published in the Columbia Basin Herald Newspaper on June 29th. Display ads were published in the Quincy Valley Post Register on July 21st and 28th, the Wenatchee World on July 22nd, 27th, 29th, and 31st, and in the Columbian Basin Herald on July 22, 27th, 29th and August 1st. Spanish language display ads were placed in East edition of El Mundo news on July 21st and 28th.

A press release including information for public broadcast was distributed on radio, TV, newspapers in Adams, Douglas, Franklin, Grant, Lincoln and Spokane counties on June 30th.

Information about this hearing was placed on the Department of Ecology's online public calendar. On June 29th an email about the hearing and comment period was sent to all of those on the list served for interested parties for the Quincy data centers, and a second email reminder was sent out on July 27th.

Flyers advertising the hearing in English and Spanish were posted at public locations around Quincy the week of July 4th through 8th. The flyers were posted by ecology staff at the following locations: Tacos Jalisco, Atkins Grocery, Quincy Library, the Saint Pious Catholic Church, Quincy Aquatic Center, and we have a note that the Presbyterian and Nazarene churches did not have anyone at the church when we came by.

Any testimony received at this hearing, along with any written comments received by the end of the comment period, will be part of the official hearing record for this issue. Those offering testimony will receive a copy of the response to comments that Ecology prepares. If you would like to send Ecology written comments, please email them to Kendra Robinson at the Department of Ecology. I put the information on the back board. She can also be faxed or emailed or sent directly.

Was there anybody that had Spanish translation that they would like help with?

Male: *[Repeats in Spanish]*

Lindsay Blain: Okay, I have about seven people that want to testify I will call you up in the order that I was given the card, and let's set a timeframe of about 10 minutes per person, does that seem fair? Does anybody want longer or shorter?

Male: Shorter.

Lindsay Blain: Does that sound too long? Okay, let's do about five minutes. And if you've got a couple of last minutes, I'll let you know when it's the five minutes mark and then you can wrap up to the end. So the first person is Terry Brewer, if he could come up here. And if you can state your name and what you're representing.

Terry Brewer: My name is Terry Brewer. I'm Executive Director at Grant County Economic Development Council in Moses Lake, Washington. I'm also an elected commissioner at Grant Public Utility District here in Grant County. My home address is 19797 Fairway Drive Northwest, Silk Lake, Washington.

I'm here tonight to speak in favor of the air permit as being proposed by the Department of Ecology. I am not a scientist, so I don't understand everything that's in it or begin to present that I understand it. But I worked in this county for 14 years for this Economic Development Council. My job is economic development – bringing jobs to Grant County, bringing new private sector investment to Grant County.

And I've worked with the Department of Ecology and other state agencies on many projects through 14 years, and I've learned through my experience in dealing with those different projects, the different companies that I have worked with who are out of state companies coming to Washington for the first time and looking at an industrial-type project. And I have very often heard the comments that "we've done business in many other states, including California, and nobody's as tough as Washington." And you know what my response has been? "I'm not going to apologize. I live here, and I'm glad that they're doing what they're doing. They're looking out for the citizens and the welfare and the health of the people in our state.

In many cases, not every one, because I've dealt with hundreds of companies and hundreds of projects in 14 years, but in many of those cases, those companies have chosen Washington, they have chosen Grant County, and in these cases, like we're talking about the data centers, they've chosen Quincy. I'm proud of that. New

jobs in our state, new investment in our community, and making this community's economy more stable and a better place to be for future generations is important to me and the organization I work for.

I do appreciate the work that the scientists, the engineers at the Department of Ecology go through to review these applications, scrutinize and come up with the requirements that they have for the good of the people of the State of Washington, and certainly for the people of this community. I don't live here, but believe me, I wish, along with the other people in the community I live in, that we had a data center in my community providing some jobs over there, tax base over there, but for a number of reasons it won't happen. But I trust that what Ecology has evaluated was done properly, and that the permit as being proposed is certainly within line with the federal and health standards of this state. I appreciate the work and I'm in favor of this going forward. Thank you.

Lindsay Blain: Thank you.

Terry Brewer: I would like to add one more thing. I started working with John Sabey and John Ford more than five years ago, and I make it a rule of mine to do as much as I can to investigate the companies that we're working with, to make sure that they're good solid companies, that they're not fly by night, going to come in and do something that really disrupts our community and causes havoc and turmoil. Sabey is a good, solid company. I've toured their data centers, I've seen their facilities, I've talked to some of their customers. I've talked to people in the communities where they have data centers. They're a good operator – a company that I know we will be proud to have in our community. Thank you.

Lindsay Blain: Thank you. David Dowan.

David Dowan: My name is David Dowan, I'm a resident of Quincy. I'm here to speak on behalf of being in favor of the air permit that the Department of Ecology needs to issue for the Sabey Corporation to build here in town. I'm a level __ electrician with the IBW 191. I have worked on Sabey's projects before. I find Sabey to be a reliable and trustworthy company, committed to safety and everything they claim.

I live here. This town is not any less safe. I don't worry about my health. My house is in the shadow of everything the maps that Ecology has put together shows us. I'm not concerned about it. I'm not concerned about my health. I've made my living on these

data centers for the last five years. They bring jobs. They bring economic security to the city and to the area. Every business in Quincy that I've been around in the last five years has prospered by these data centers being here, and I don't see that Sabey will change that. I only see that Sabey will bring new jobs and new opportunities for Quincy and will increase our economy.

Lindsay Blain: Thank you. Jessica, is it McCauley? Penny Gates.

Penny Gates: My name is Penny Gates and I came to speak in favor of the permit for Sabey Company. I also believe that they bring more jobs to the community and that the Department of Ecology has done a really good job of researching the different hazards that are with any growth. Nothing is without impact, but I believe that after looking at what has been presented here tonight that impacts that are detrimental are minimal, and the impacts that are economic are greater. This is my first time working on this side of the mountains. I anticipate that I will be here for awhile now, and I have a brother who lives in town. Thank you.

Lindsay Blain: Patrick Galaton?

Patrick Galaton: I am Patrick Galaton. I am the political register for the International Brotherhood of Electrical Workers. I am currently working on a Microsoft project. I think this is the fifth time I have worked on data centers, and I think you guys are very fortunate to have this industry and not some of the others I have worked for or on in this city.

All these data centers have brought lots of people into your area to help boost your economy. None of the data centers that I've seen have had a negative impact on the environment they're at. By nature, they don't want to run their generators. They're very expensive and very expensive to put in. So most corporations that try to go above their permits have a financial reason to do it. They have actually a financial reason not to do it, because they are very expensive to run.

So we are here to support the Sabey air permit, and wish that you guys do it, and thank you for having us in your town.

Lindsay Blain: Thank you. Is it Pat Boss?

Pat Boss: I'm Pat Boss, I'm here on behalf of the Port of Quincy, in Quincy, Washington. We're on G Street in Quincy, 98848. And I'm here tonight to testify on behalf of the port in support of the Sabey Data

Center project. I'm also – and I know the Port of Quincy has also worked with Sabey for a number of years. They've been in the community for several years. They've done a great job of working with stakeholders, with the city, the port, all the agencies, the Grant County EDC, and have done a great job of listening to folks and have done a great job in Olympia of also promoting data centers and have a great track record in that industry.

I also want to say too that the Grant County PUD and the Grant County EDC have done a lot of work on this, and the fact that Grant County PUD has some of the lowest occurrences of power outages in the country, lowest occurrences of power failure, Quincy's got some of the very lowest in the state and in the region as well – that all bodes well for data centers siting here, and that's one of the reasons they come here, because they don't want to run their backup diesel generators, and they want to be in a place that they have consistent power, which is what the PUD affords them.

And the other thing too I want to talk about is the fact that the Quincy air shed is very large. It's a huge air shed, a huge area for industry, for agricultural, for development. It's not a congested area like Seattle, and it's a very safe place for these types of developments.

And then lastly, the fact that the Department of Ecology has repeatedly said that this is an area where they've done some of the most rigorous reviews of data centers and potential data center emissions – knowing the Department of Ecology like I do, and knowing the fact that they do an incredibly rigorous job anywhere in the state on working on these types of projects, if they're doing a more rigorous review in Quincy than anywhere else, that tells me it's probably the most rigorous in the world.

So I know that the port, and I know that a lot of the other groups and entities that have work with Ecology understand that their work has been excellent on this, their efforts have been tireless, and they've answered a lot of questions, and I think everybody that I work with has every faith and is very complimentary in the agency for the work they've done, and I just want to commend the agency for the great work and their rigorous review that's going to help protect the citizens of this community. So thank you.

Lindsay Blain: Thank you. Patty Martin.

Patty Martin: Patty Martin, 617 8th Street Southwest here in Quincy. I just want to, one, thank the Department of Ecology for the first of the three

different presentations that I've been to where there was actually a focus on the risk to the community rather than PR and regulatory mumbo-jumbo. It was good to have a good presentation that focused more on the risks.

I'm taking my testimony basically on the issues that I see with legalities with the permit. The first thing I'd like to do is object to the fact that the Department of Ecology and Sabey are using meteorological data from the Moses Lake Airport, which has only collected data for ten years. Whereas the Ephrata airport has collected meteorological data on an hourly basis since 1949, so there's 61 years worth of data. According to the state climatologist, the Ephrata airport is more representative of Quincy's situation, since both Ephrata and Quincy sit next to the mountains, whereas the Moses Lake Airport is open, next to water, and relatively flat.

If the modeling is based on a flawed assumption, then the health risks are based on flawed assumption. And so I'd like to insert to the record the expert testimony from Dr. Ron Sahu, from the Microsoft appeal that we have, and it discusses many of the same issues that are present in the Sabey permit.

The second objection I have is to the use of increased stack height rather than meaningful control technology. BACT, which is Best Available Control Technology, implies that once something has been proven to be economically and technically feasible, it should be employed. Olympia has diesel oxidation catalysts on five generators, and Moses Lake is using a two-phase catalyst system of some sort that is guaranteed to reduce emissions by a large margin. And my objection is that this is needless exposure to our community. Regardless of how people want to minimize it, it's needless exposure. There are people that live next to these facilities – the Blakeleys, the Razies, the Canaans – and then all of Quincy over which the other data centers plumes flow. It's totally needless exposure.

I also object to the use of Tier Two generators. I do know that in the draft permit, which I'm going to also include the draft permit because there's a number of issues that ecology has requested that Sabey has suggested be removed, like communication with the school district and wanting to start their construction after 2014 I think it is. So I'd like to support Ecology in their attempt to keep that permit as tight as it can be. The use of Tier Two generators are reserved for emergency only generators, and as Sabey has documented in their summary on their Notice of Construction support document, they are going to for non-emergency purposes

do main switch gear and transformer maintenance tests periodically, which would then require the Tier Four that Ecology speaks to in the permit.

I also have some concerns, since Yahoo and Sabey will share a substation, when Microsoft was installing their generators, there was a substantial amount of downtime. In fact, there was 99 hours of downtime for that initialization period. And I'm concerned that the period of time needed to install these generators and connect them has not been factored into the modeling, and I'd like to have Ecology look into that.

And then finally, again the concern over our neighbors – in this case it is the Blakeleys – of 38 cancers per million, and the possibilities of acute breathing impairment primarily from NO2 in their yard. This is something Ecology has, but these people that are reading the public record can see that we know that we're potentially putting a family at risk, and again, the reason for the determination of fact, which is required under state statute with any notice of construction, is to reduce the exposures to everybody.

And then I do have one other issue, and that is that I would like to again insert the objection that Ecology has failed to use 4DCFR51 Appendix W, which is for compliance with the National Am___ air quality standards. Thank you.

Lindsay Blain: Thank you. Is there anybody else that wants to give public testimony? No? Okay, let the record show it is 7:25 and I am going to adjourn the hearing. Thank you.

[End of Audio]

Appendix E
Public Notices

1. **News release:**

DEPARTMENT OF ECOLOGY
State of Washington

News Release

FOR IMMEDIATE RELEASE – June 30, 2011
11-XXX

Public invited to comment on draft permit for
Sabey's Intergate-Quincy Data Center

SPOKANE — The Washington State Department of Ecology (Ecology) invites the public to comment on a proposed "notice of construction" order (permit) for the Intergate-Quincy Data Center that the Sabey Corp. proposes to build in Quincy.

The proposed notice of construction is a formal approval document that is required before the company can install 44 backup generators to support the facility's data servers. The purpose of the generators is to power the facility in case Grant County Public Utility District electrical power service is disrupted. The generators are powered by diesel engines.

The Intergate-Quincy Data Center will be located at the junction of Road 11 NW and Road O NW in Quincy. Sabey will lease the center to up to eight independent tenants. The generators have a power capacity of up to 88 megawatts. The proposed center's three buildings will be phased in over several years, depending on customer demand.

Diesel engine exhaust carries toxic air pollutants. Because of this, Ecology requires a thorough evaluation of the potential health risks posed by the project. This evaluation was conducted under what's called a "second-tier review of the health impact assessment." The second-tier review is required when emissions of pollutants could potentially reach a certain regulatory threshold.

A summary of the potential health effects caused by diesel engine exhaust is available online at http://www.ecy.wa.gov/pubs/1102005.pdf .

Before the permit can be approved, public comment will be taken into consideration. The public may comment in writing to Ecology until midnight on August 8, 2011. In addition, a public hearing is scheduled to be held at 6:30 p.m. Wednesday, August 3 in the upstairs

meeting room at Quincy City Hall, 104 B St. SW. Pre-hearing presentations and discussion will begin at 5:15 p.m. The hearing will continue until everyone who wants to testify has had the opportunity to do so.

Copies of the draft permit and the health assessment are available for review at the offices of the city of Quincy, 104 B St. SW, Quincy, and at the Department of Ecology, Eastern Regional Office, 4601 N. Monroe St., Spokane, WA. For more information or to view the documents online, go to http://www.ecy.wa.gov/programs/air/quincydatacenter.
Ecology will review and respond to all comments. The draft permit could be amended based on the comments Ecology receives.
###
Media Contacts: Jani Gilbert, Communications, 509-329-3645; jagi461@ecy.wa.gov

For more information: http://www.ecy.wa.gov/programs/air/quincydatacenter

Ecology's Web site: http://www.ecy.wa.gov

Broadcast version

The Sabey Company is planning to build its Intergate-Quincy Data Center in Quincy, and the Washington Department of Ecology is asking the public to comment on the required air quality permit. Sabey wants to build a three-building data center with 44 diesel-powered backup generators to use in case of a power outage.

Diesel engine exhaust contains toxic air pollutants. Because of this, the permit requires a thorough Health Impacts Assessment.

The permit is not final until the public has had time to weigh in. A public meeting will be held at 5:15 p.m., followed by a formal hearing at 6:30 p.m. on Wednesday, July 13th at Quincy City Hall. Comments are due by midnight on August 8, 2011. Contact Ecology for details.

###

2. Public Notice required under WAC 173-400-171(2)(a)(i) and WAC 173-460-100(6)

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
NOTICE TO CONSTRUCT A NEW AIR POLLUTION SOURCE,
ANNOUNCEMENT OF PUBLIC HEARING,
& SECOND TIER PETITION APPROVAL RECOMMENDATION

The State of Washington Department of Ecology (Ecology) has received application to construct a new air pollution source. Sabey Intergate Quincy, LLC has proposed to build the Intergate-Quincy Data Center located at the southwest corner of the intersection of Road 11 NW and Road O NW, Quincy in Grant County. The Intergate-Quincy Data Center will contain three separate building once it is fully constructed, and will install and operate up to 44 diesel engines that will power 2.0 megawatt electrical generators for a total of 88 megawatts of emergency backup electrical power. The diesel engine exhaust particulate and nitrogen dioxide emissions from the diesel engines was reviewed under a Second Tier Health Impact Assessment to evaluate health risks posed by the project. After review of the completed Notice of Construction application and other information on file with the agency, Ecology has decided that this project proposal will conform to all requirements as specified in Chapter 173-400 WAC. After review of the Second Tier Health Impact Assessment, Ecology concluded that impacts to the community due to the Intergate-Quincy Data Center will meet the protective requirements contained in Chapter 173-460 WAC. Copies of the Notice of Construction Preliminary Determination, the Second Tier Petition Recommendation, and supporting application documents are available for public review at Department of Ecology, Eastern Regional Office, 4601 N. Monroe, Spokane, WA 99205-1295, and at the City of Quincy, 104 B Street SW, Quincy, WA 98848. A public hearing has been scheduled to start at 5:15 PM on August 3, 2011 in the upstairs meeting room at the Quincy City Hall located at 104 B Street SW in Quincy. The public hearing will include presentations by Ecology and Sabey on the proposed project, the air quality regulatory requirements, and the results of our analysis. Public comment will be taken starting at 6:30 PM. In addition to public comments taken at the public hearing, the public is invited to comment on this project proposal by submitting written comments no later than August 8, 2011 to Kendra Robinson-Harding at the above Spokane address.

3. Display ad, English

You Are Invited to a

Public Hearing

on the

Sabey Intergate-Quincy Data Center

Proposed Permit

Wednesday, August 3, 2011

- **Meet and Greet at 5:15pm**
- **Presentations at 5:30pm**
- **Formal Hearing at 6:30pm**

Quincy City Hall, Upper Meeting Room
104 B Street SW, Quincy, WA

We want to hear from you!

The public comment period is open now. Comments will be accepted until midnight on August 8, 2011

To comment or for more information:

http://www.ecy.wa.gov/programs/air/quincydatacenter

Email: krob461@ecy.wa.gov

DEPARTMENT OF ECOLOGY
State of Washington

4. Display ad, Spanish

Le invitamos a una

Audiencia Pública

sobre el propuesto permiso

para la

Sabey Intergate-Quincy Data Center

Miércoles, el 03 de agosto de 2011

- **Reunir a las 5:15 p.m.**
- **Presentaciones a las 5:30 p.m.**
- **Audiencia Oficial a las 6:30 p.m.**

Quincy City Hall, Sala de Reuniones Superior
104 B Street SW, Quincy, WA

¡Queremos escuchar sus comentarios!
El periodo de aceptar comentarios está abierto ahora hasta la medianoche del 08 de agosto de 2011.

Para entregar sus comentarios o obtener más información:

http://www.ecy.wa.gov/programs/air/quincydatacenter

E-mail: krob461@ecy.wa.gov

DEPARTMENT OF ECOLOGY
State of Washington

Appendix F
Technical Support Document

Appendix G
Final Permit