

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON
UM 1789/UE 311/UP 344**

In the Matters of PORTLAND GENERAL
ELECTRIC COMPANY, Application to
Defer Revenues and Costs Related to the
Environmental Remediation Costs
Recovery Adjustment, Schedule 149 (UM
1789); Schedule 149, Environmental
Remediation Costs Recovery Adjustment
(UE 311); and Application for Approval of
Sale of Harborton Restoration Project
Property (UP 344)

**REPLY TESTIMONY
OF THE
CITIZENS' UTILITY BOARD OF OREGON
September 30, 2016**



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REPLY TESTIMONY OF
THE CITIZENS' UTILITY BOARD
OF OREGON

My name is Bob Jenks. My qualifications are listed in CUB Exhibit 101.

I. Introduction

While CUB does not oppose the establishment of deferred accounting to track costs and revenues associated with Environmental Remediation, CUB cannot support Schedule 149 or the basic construct that PGE is proposing. PGE has failed to demonstrate the prudence of its proposal, fails to discuss the risks associated with its

proposal and is proposing a mechanism that would likely increase costs to customers for more than a decade.

CUB's testimony will discuss the following issues:

1. The Environmental Liability that PGE has Incurred
2. The Harborton Project and DSA Ys Risks
3. The Proposed Recovery Mechanism
4. Aligning Customer/Shareholder Interests in Environmental Remediation

II. The Environmental Liability that PGE Has Incurred

PGE's testimony in support of its request offers little insight into the cause of PGE's environmental liability. PGE identifies three elements related to its environmental liability which will flow into the recovery mechanism:

- Portland Harbor
- The Downtown Reach, and
- PGE's Natural Resource Damage (NRD) obligation.

Unfortunately, PGE tells us little about these elements. Certainly there is not enough in PGE's application to determine whether PGE's potential environmental liability arose out of prudent activities.

A. Portland Harbor

PGE describes the costs associated with Portland Harbor as actions "that require remediation for which PGE is responsible, or sites which hazardous materials may have migrated."¹ PGE identifies itself as a Potential Responsible Party ("PRP")².

¹ UE 311/PGE/100/Behbehani-Brown-Stevens/4.

² UE 311/PGE/100/Behbehani-Brown-Stevens/4.

However, PGE's testimony offers no discussion of why it is a responsible party. There is no discussion of PGE's role in contaminating the Portland Harbor and whether some of the environmental damage could have been avoided. PGE offers no evidence as to whether these liabilities grew out of prudent activities of PGE.

PGE has filed, pursuant to CERCLA³, information responses with the EPA regarding the Portland Harbor site. CUB attaches part of PGE's filing with the EPA as Exhibit 102. These documents suggest that some of PGE liability may be unrelated to PGE activities and may be the result of the Company not investigating property contamination before it acquired the property:

To the best of PGE's knowledge, after reasonable inquiry, PGE had/has no information related to the disposal or placement of hazardous substances, waste, or materials on or at any part of the Wacker Substation easement property at the time that PGE acquired the easement from Wacker Siltronic. To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the Wacker Substation easement property prior to PGE acquiring the easement.⁴

The PGE owned Wacker Substation sits on an easement of Wacker Siltronic, Oregon's largest emitter of chemicals into the Willamette River.⁵ Before Wacker purchased the site in 1978, the site was the "Gasco" location where NW Natural manufactured gas⁶ and where NW Natural is actively engaged in environmental remediation.⁷ Without knowing the state of the property before PGE acquired it, PGE cannot determine whether it was the source of the contamination, whether the contamination was already at the site, or whether it migrated to the site. PGE acquired

³ See 42 U.S.C. §§ 9601-9675 (Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA")).

⁴ CUB Exhibit 102, page 6 or 57. This is one of more than 30 104(e) data responses PGE submitted to EPA.

⁵ <http://portlandtribune.com/sl/224914-87113-siltronic-plant-in-portland-dumps-the-most-toxics-into-oregon-rivers>

⁶ <http://www.deq.state.or.us/lq/ECSI/ecsidetail.asp?seqnbr=183>

⁷ See Docket UM 1635.

this site in 1978, well after the US Congress began passing laws holding corporate polluters accountable for the cost of pollution. PGE should have known there was a risk associated with this industrial site, and should have performed analysis at the time.

Without that analysis, there is no relevant or appropriate benchmark to determine PGE's responsibility for contamination versus Wacker or NW Natural.

There are similar filings for each of PGE's sites. While the filings do show that PGE is connected to the contaminated sites, they do not demonstrate that PGE's actions on the sites were part of its prudent conduct. PGE has demonstrated that it has liability for the Portland Harbor area, but in the absence of any additional information or analysis, it has not demonstrated that this liability is connected to prudent activity related to serving utility customers. Without a link to the prudent provision of utility service, these costs are not eligible for recovery from customers.

B. *The Downtown Reach*

The Downtown Reach environmental liability has been reviewed in previous general rate cases⁸. CUB stipulated to recovery of \$3.1 million over a two year period (2015 and 2016) in UE 283.⁹

PGE is proposing that costs currently associated with the Downtown Reach be removed from base rates after the next rate case and included in Schedule 149¹⁰. PGE's testimony offers no update on this project. Customers have been charged \$3.1 million over two years. How much was spent? How much progress has been made? What is the best estimate of the cost of remediation of the Downtown Reach site? What have customers gotten for the \$3.1 million that they have been charged? PGE got an agreement

⁸ UE 183 and UE 294.

⁹ See OPUC Order No. 14-422, page 9.

¹⁰ UE 311/PGE/100/Behbenani-Brown-Stevens/14.

from parties to fund this remediation for two years, and is requesting additional cost recovery without updating parties as to the status of that remediation.

C. PGE's Natural Resource Damage (NRD) Obligation

According to PGE, in addition to cleanup costs, natural resources must be restored to the state they were in before injury from environmental contaminants.¹¹ PGE anticipates “an NRD assessment” in August or September, 2016. Because we are just days away from the end of September, PGE should update its filing and include discussion of its NRD obligation.

PGE offers no evidence that the NRD obligation is related to prudent provision of service to customers. In addition to updating its filing, PGE should provide evidence that these costs relate to prudent activities.

III. The Harborton Project and DSAY Risks

The Harborton Restoration Project represents a capital investment that PGE is seeking recovery for, which will “restore and enhance 62 acres of PGE property”, with the goal of providing “discounted service acre years” (DSAY) credits that can be used to offset the liabilities¹². CUB is concerned that, as proposed by PGE, the Harborton Restoration Project places significant risk on customers, while the company is guaranteed recovery of its investment and a return on its investment.

PGE is proposing to make a capital investment in restoration with the expectation that the [REDACTED] will be generated and will provide greater value than the capital investment necessary to create them. However, PGE admits that the number may vary,

¹¹ UE 311/PGE/100/Behbenani-Brown-Stevens/6.

¹² UE 311/PGE/100/Behbenani-Brown-Stevens/6-7.

¹³ CUB Confidential Exhibit 103C.

and, in fact, the DSAYs may not be issued by the Trustees.¹⁴ In addition, PGE admits that the value of the DSAYs is “unknown.”¹⁵ PGE offers little evidence to support its expectation that the DSAYs generated will have the value PGE anticipates. If a number of PRPs invest in restoration and place DSAYS on the market at the same time, the value could decline. PGE’s proposal places the full risk over the value of the DSAYS on customers.

A. No Risk Analysis

PGE assumes that its capital investment will produce [REDACTED] over 10 years and values those at [REDACTED] based on a value that Portland paid for DSAYs.¹⁶ However, both these projections (volume and price) are forecasts. PGE could be awarded a lower number of DSAYs. The value of DSAYs certainly could be less and because the DSAYs will be sold over several years, the value is subject to changes in a relatively non-liquid market.

PGE has offered no risk analysis to suggest what are the alternative volumes and prices that might be produced under different circumstances. PGE offers little evidence to support its volume and value forecasts. Because both the costs and the benefits flow through Schedule 149 to customers, customers are on the hook if the costs are greater than the benefits.

B. Ratebased Investment and Financing Cost

CUB is concerned about the incentive that PGE’s proposal creates. It allows PGE to make a capital investment, earn a return on that investment, while placing all the risk

¹⁴ CUB Confidential Exhibit 103C.

¹⁵ CUB Confidential Exhibit 103C.

¹⁶ CUB Confidential Exhibit 103C.

of that investment on customers. While that may not be unusual, in this case it is for a cost that is not associated with serving current customers. Instead, it is, at best, a cost associated with environmental liability from serving past customers – and at worse, it is the result of handling PCBs and other toxic chemicals in an imprudent manner.

Turning environmental liabilities into business opportunities creates a perverse incentive. Adding capital investments through single issue ratemaking mechanisms where the cost of capital and depreciation are not reviewed in inappropriate.¹⁷

The size of the capital investment at issue here is modest, and most of the capital investment occurs in 2017.¹⁸ Independent of a judgement of prudence, CUB believes that it is appropriate to require that the Company finance this modest investment through debt, without equity. CUB supports this position for the following reasons:

- It removes the perverse incentive of the Company earning a profit from creating an environmental liability and cleaning it up.
- It saves money. PGE's last rate case established a cost of equity of 9.6%¹⁹ or 13.6% when grossed up for taxes. This is an expensive way to finance capital investments. At the same time PGE's cost of debt was below 5.5%²⁰. This is a significant difference in financing costs.
- Because this is not a project that serves current customers – it is a project cleaning up a mess possibly left after serving historic customers – current or future customers should not be asked to pay shareholders for a return on investment.

¹⁷ See CUB testimony, UE 308.

¹⁸ UE 311/PGE/Confidential Exhibit 106C.

¹⁹ OPUC Order No 15-356, page 6.

²⁰ PGE's Cost of Debt was update after the last rate case, so the actual number is not in that order.

- As the cost of debt has reached and leveled off at historic lows, PGE has continued to operate as if nothing has changed. It finances its investments with 50% debt and 50% equity. There is both a cost and a risk associated with debt, so CUB is not arguing that utilities should generally finance solely with debt. However, as the cost of debt declines, the utility should be performing analysis as to whether it should take on a little more risk by increasing the volume of financing that is done with debt.
- The capital investment at issue here is modest and won't have a material effect on PGE's capital structure.

C. PGE Should Bring this Forward in a GRC

More appropriately, PGE should remove this from Schedule 149 and seek to recover it in its next general rate case (GRC), assuming the investment is used and useful. Capital investments are appropriately reviewed in GRC along with cost of capital and depreciation. PGE has already been making this capital investment and booking it to construction work in progress. Delaying recovery will not harm PGE significantly, but will allow for better ratemaking. Most importantly, it will allow PGE to bring forth analysis on the risks and benefits of this investment, which may allow it to be found to be prudent.

For all of the reasons discussed above, PGE has failed to offer enough evidence to support the Harborton Investment as a prudent investment.

IV. The Proposed Recovery Mechanism

CUB urges the Commission to reject Schedule 149 at this time. While CUB supports allowing PGE to defer the costs at issue here, Schedule 149 is about rate

recovery and PGE has not provided information to support the prudence of its costs as related to the Portland Harbor. In addition, Schedule 149 has a series of other problems.

A. *Double counting*

PGE already has costs associated with environmental remediation in rates. To avoid double counting PGE proposes:

“that mitigation costs for Downtown Reach that are currently included in retail rates would not be included in the PHERA until the test year in PGE’s next general rate case.”²¹

But this ignores the fact that what is in base rates is more than just costs associated with the Downtown Reach. In UE 294 PGE proposed to increase the Environmental and Licensing Service (ELS) costs, primarily due to remediation of the Downtown Reach:

We forecast that Environmental and Licensing Service (ELS) costs, as charged to A&G, will increase from approximately \$2.7 million in 2014 to \$4.6 million in 2016. This increase is primarily related to the remediation of portions of the Downtown Reach area of the Willamette River and is based on the stipulated increase of \$3 million spread over 2015 and 2016 as approved by Commission Order No. 14-422 (Docket No. UE 283).²²

So, while the Environmental and Licensing Service (ELS) budget increased primarily due to the Downtown Reach, the amount included in the A&G budget for ELS was \$4.6 million²³. The rest of this ELS A&G budget was described as related to remediation, investigation and reporting. The difference that was already embedded in rates was \$2.7 million.²⁴

One problem with setting up special mechanisms to recover costs outside of a GRC test year is avoiding double counting. In this case, PGE is removing costs

²¹ UE 311/PGE/100/Behbehani-Brown-Stevens/14.

²² UE 294/PGE/600/Lobdell-Henderson-Tooman/13-14.

²³ UE 311/PGE/100/Behbehani-Brown-Stevens/14.

²⁴ UE 294/PGE/600/Lobdell-Hendeerson-Tooman/13

associated with a particular project that is associated with the Downtown Reach, but not the additional dollars that are part of the rates and are used for investigation and remediation of environmental hazards.

PGE's testimony says that annual environmental remediation costs "would be first offset by any amount collected in retail rates"; however, Schedule 149 does not contain similar language. If Schedule 149 is approved, it should be done so with the condition that in addition to removing the Downtown Reach costs that are already in rates, \$2.7 million of additional costs should be removed from Schedule 149 each year because these costs are already recovered in rates.

B. *Capital Investments*

The recovery of capital investment through Schedule 149 is problematic. PGE will clearly be capitalizing its Harborton Project and may be capitalizing other costs.

First, it is not clear what the depreciation schedule is for these investments. PGE is clear that capital costs associated with the Harborton Project will be recovered through the mechanism and will be exempt from the earnings test (see more discussion of this below). However, PGE does not discuss the useful life or how the capitalized project will flow through the mechanism. PGE assumes that the remaining life is through 2028 years on the allocated revenues, which include DSAY revenues.²⁵

On its face, Schedule 149 seems to suggest that the capital investment will be recovered through this mechanism over 5 years after it is found to be prudent. However, because this is a capital investment, CUB assumes that PGE actually intends to recover the investment over the life of the investment, with a return on its investment, and that

²⁵ UE 311/PGE/101/Behhani-Brown-Stepens/2.

what goes into Schedule 149 is the annual revenue requirement associated with that investment.

Further, CUB assumes that the useful life of the Harborton capital investment which was made to generate the DSAY revenue follows the useful life of the Allocated Revenue (remaining life through 2028). But if that is the assumption, then some of the rest of it does not make sense. For example, having an annual prudence review of the Revenue Requirement associated with Harborton has no purpose. Once there has been a single prudence review of the capital investment, it does not need to be revisited each year.

The revenue requirement that flows into Schedule 149 should receive the PURE interest rate. Not only would it presumably already have been found prudent, but it would include an element that represents return on investment. Letting that return earn a return only pushes up costs to customers.

C. Earning Test

1. PGE's Earnings Test is Porous

PGE – sort of – proposes to make these costs subject to an earnings test. The problem with the proposed earnings test is that it is not all that it seems.

First, PGE exempts the first \$6.5 million of remediation costs. They are not subject to an earnings test. However, because the Downtown Reach (\$1.55 million per year) and \$2.7 million of costs are already in base rates, this means that cumulatively, more than \$10 million of costs each year are not subject to the earnings test. Second, the Harborton Project is not included in the earnings test. Third, the earnings test is after the Annual Allocated Revenues. And if the Annual Allocated Revenues are greater than the

costs that are transferred, this amount is added to the following years' Annual Allocated Revenues.

In the end, we are left with a mechanism with an earning test that is unlikely to be triggered. PGE makes few arguments to support its limitation of the earnings test. There is no real explanation for the \$6.5 million exemption or the Harborton exemption.

2. *CUB's Alternative Earnings Test*

If we are going to have an earnings test, let's make it serve the purpose of an earnings test. In CUB's view an earnings test is designed for the following purpose:

The regulatory preference is to forecast costs through a General Rate Case (GRC). The purpose of an earning test is to ensure that when ratemaking is done through special mechanisms, a utility does not get a better deal than they would if we could accurately forecast costs and revenues in a GRC.

An earnings test is not punitive on the utility, even though some seem to perceive it to be punitive. If a utility has excess earnings, and if the cost at issue in the special ratemaking mechanism is smaller than the excess earning, then there simply is no basis to raise rates. The utility has recovered its costs, including the costs associated with the special ratemaking, and earned a reasonable return.

In this case there is no reason for PGE exemptions except to make ratemaking by Schedule 149 a better deal for shareholders than ratemaking through a general rate case. There is no basis to allow the Company to set an earning level that is \$6.5 million above their authorized earnings. If the net costs after application of the Annual Allocated Revenues is \$6.5 million, and the utility has excess earnings of \$10 million, then rates are sufficient to recover costs and there is no basis for raising rates to recover the \$6.5 million.

The same is true of the Harborton revenue requirement. If the revenue requirement associated with Harborton is \$1.5 million, and the Company has \$5 million in excess earnings, then rates are sufficient to recover the Harborton investment and its return on investment without an additional rate hike.

D. Annual Allocated Revenue Roll Forward

If the Annual Allocated Revenue is greater than the costs for a particular year, PGE proposes that the Excess Allocated Revenue be rolled forward. This allows for the reduction of future costs.

Because these costs are largely costs that were not incurred to serve current customers, CUB proposes an alternative which creates some customer benefit to mitigate some of the intergenerational inequity issues. The excess Allocated Revenue should instead be used to reduce the rate base associated with the Harborton Project. This not only reduces future costs, but it also reduces financing costs creating an even greater future cost reduction.

E. Functionalization

PGE proposes that costs be functionalized based on the preponderance of the provided historical function. Because PGE has failed to link the sites to prudent utility operations, it is impossible to functionalize them down to elements of utility operations. CUB believes that the functionalization associated with each site should be transparent and urges the Company to file more information related to site specific functionalization.

F. Exempting Some Schedules

Additional equity issues arise from the exemption of some schedules. PGE proposes to exempt schedules 76R and 576R but offers no reason. These schedules are

for economic replacement power for partial requirements customers and for direct access customers. Since PGE has not functionalized these costs, it is unclear to CUB why they are fully exempt.

V. Aligning Customer/Shareholder Interests in Environmental Remediation

Environmental Remediation costs have become an issue in recent NW Natural and Cascade Natural Gas cases as well as PGE. These dockets have been controversial. The NW Natural docket began in 2012 and was not resolved until 2016. And even so, it established a mechanism that was not supported by any party and is scheduled to be reviewed in 2018.²⁶ CUB also identified this as a concern in UE 308 where CUB opposed PGE's proposal to invest in gas drilling, in part, because it potentially exposes PGE to future environmental remediation costs. Regulated utilities are in the unique position of being able to raise rate in order to pass on many of these costs to their customers – whereas competitive pricing may prevent other companies from raise prices due to environmental remediation.

CUB is concerned that the mechanism established in that docket does not align interests between the Company and its customers. It primarily uses an earnings test to protect customers from excessive rates. And while a earnings test does prevent overcharging customers, CUB is concerned that it is not the best mechanism for aligning interests.

Having a long term cost stream governed by an earnings test will lead to a utility managing the project based on the earnings test. Utilities focus on earnings – some more

²⁶ In Order No 15-049, issued on 2/2/15 the Commission ordered for a review" in three years, or when NW Natural obtains greater certainty regarding its future remediation costs, whichever occurs first." p. 14.

than others. If a mechanism allows a utility to recover \$10 million before the application of an earnings test, then this \$10 million becomes the budget. Rather than managing for the least cost results, overall, the project will be managed to keep year-after-year results at \$10 million or below.

In addition, utilities have some ability to move costs between fiscal years. Out-of-period accounting adjustments can move millions in costs and/or revenues between fiscal years. Utilities can also do this as they manage projects.

CUB prefers incentive mechanisms where the utility and the customers have the same interests: in this case it is to comply with environmental laws while keeping the costs low and maximizing insurance proceeds.

Rather than manage to an earnings test CUB prefers mechanisms that are simple and keep interests aligned. Some example mechanisms are as follows:

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A. *Direct Sharing of Costs*

Sharing mechanisms align interests because customers and shareholders share costs and straightforward and simple. CUB recognizes that customers collectively have deeper pockets than utilities, but also recognizes that these are not costs that are directly related to current service. CUB believes that a sharing mechanism best serves the interest of fairness while aligning interests.

In this case CUB would propose that the Commission allow for Schedule 149, but eliminate the earnings test and share the costs (net of insurance and other revenues) with customers allocated 90-95% and the company 10-5%.

1. *Earnings Bands*

CUB was supportive of the stipulated agreement between Staff, Intervenor, and NW Natural. While the stipulation was a negotiated settlement which has precedential value and was rejected by the Commission – though that seems to have more to do with the treatment of deferred costs than the forward looking mechanism – CUB believes that the earnings band approach offered an alternative approach that aligns interests.

The stipulated agreement offered an improvement over a strict earnings test, because it maintained the utilities incentive to keep costs under control regardless of whether its earnings were below or above what was authorized, and while a utility could have to contribute, it also allowed a utility to overearn.

In this case, CUB proposes an earning band mechanism with the following elements:

- Earnings Band 1. If the utility's earnings are below a threshold then Company can recover all costs it prudently incurred. This threshold is set below authorized earnings. CUB recommends 75 basis points below authorized.
- Earnings Band 2. If the utility's earnings are above Earning Band 1 and below authorized earnings, the utility will contribute 20% of the earnings between Earnings Band 1 and authorized earnings.
- Earnings Band 3. If the utility's earning are above authorized but below 50 basis points above authorized, the utility will contribute a portion of its 50% of its earnings above authorized in addition to the sharing from the previous band.
- Earnings Band 4. If the utility's earning are more than 50 basis points above authorized the utility would contribute 80% of the earnings above Earning Band 3, along with the sharing from the previous bands.

While this is not the simplest of methods, it does keep the focus on minimizing net costs and keeps customers and shareholders aligned.

VI. Conclusion

CUB recommends that the Commission authorize PGE to defer the costs at issue in UM 1789, but reject Schedule 149 and the Harborton Project.

Because the Harborton Project is a capital investment, it should be considered in a General Rate Case. CUB also proposes using debt financing for this capital investment.

The purpose of Schedule 149 is the recovery of environmental remediation costs. Before PGE can recover these costs, it needs to establish a relationship between the environmental remediation and prudent utility activities. Once prudence is demonstrated,

ratemaking must eliminate double counting. To the degree that an earnings test is used to protect customers, that earnings test should not be full of exemptions. Instead of an earnings test, CUB would prefer a mechanism that aligns the interests of ratepayer and shareholders.

WITNESS QUALIFICATION STATEMENT

NAME: Bob Jenks

EMPLOYER: Citizens' Utility Board of Oregon

TITLE: Executive Director

ADDRESS: 610 SW Broadway, Suite 400
Portland, OR 97205

EDUCATION: Bachelor of Science, Economics
Willamette University, Salem, OR

EXPERIENCE: Provided testimony or comments in a variety of OPUC dockets, including UE 88, UE 92, UM 903, UM 918, UE 102, UP 168, UT 125, UT 141, UE 115, UE 116, UE 137, UE 139, UE 161, UE 165, UE 167, UE 170, UE 172, UE 173, UE 207, UE 208, UE 210, UE 233, UE 246, UE 283, UG 152, UM 995, UM 1050, UM 1071, UM 1147, UM 1121, UM 1206, UM 1209, UM 1355, UM 1635, UM 1633, and UM 1654. Participated in the development of a variety of Least Cost Plans and PUC Settlement Conferences. Provided testimony to Oregon Legislative Committees on consumer issues relating to energy and telecommunications. Lobbied the Oregon Congressional delegation on behalf of CUB and the National Association of State Utility Consumer Advocates.

Between 1982 and 1991, worked for the Oregon State Public Interest Research Group, the Massachusetts Public Interest Research Group, and the Fund for Public Interest Research on a variety of public policy issues.

MEMBERSHIP: National Association of State Utility Consumer Advocates
Board of Directors, OSPIRG Citizen Lobby
Telecommunications Policy Committee, Consumer Federation of America
Electricity Policy Committee, Consumer Federation of America
Board of Directors (Public Interest Representative), NEEA

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
Section 1.0 - Respondent Information		
1. Provide the full legal, registered name and mailing address of Respondent.	Portland General Electric Company 121 SW Salmon Street Portland, OR 97204	
2. For each person answering these questions on behalf of Respondent, provide:		
Site Operator: Portland General Electric		
a. full name;	Arya Behbehani-Divers	
b. title;	Manager, Environmental Services	
c. business address; and	121 SW Salmon Street m/s 3WTCBR05 Portland, OR 97204	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-464-8141 Electronic Mail Address: Arya.Behbehani-Divers@pgn.com Fax Number: 503-464-8527	
Site Consultant: URS Corporation		
a. full name;	Laura McWilliams, PhD, LG; Ashley Kaiser; and Heather Patterson	
b. title;	Senior Geologist; Environmental Scientist & Risk Assessor; Environmental Scientist & Risk Assessor	
c. business address: and	111 SW Columbia, Suite 1500 Portland, OR 97225-5850	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-222-7200 Electronic Mail Addresses: Laura_Mcwilliams@urscorp.com; Ashley_Kaiser@urscorp.com; and Heather_Patterson@urscorp.com Fax Number: 503-222-4292	
3. If Respondent wishes to designate an individual for all future correspondence concerning this Site, please indicate here by providing that individual's name, address, telephone number, fax number, and, if available, electronic mail address.	Arya Behbehani-Divers Portland General Electric Manager, Environmental Services 121 SW Salmon Street - 3WTCBR05 Portland, OR 97204 Telephone Number: 503-464-8141 Fax Number: 503-464-8527 Electronic Mail Address: Arya.Behbehani-Divers@pgn.com	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
Section 2.0 - Owner/Operator Information		
4. Identify each and every Property that Respondent currently owns, leases, operates on, or otherwise is affiliated or historically has owned, leased, operated on, or otherwise been affiliated with within the Investigation Area during the period of investigation (1937 to Present). Please note that this question includes any aquatic lands owned or leased by Respondent.	Portland General Electric Company (PGE) is preparing separate 104(e) responses for properties within the Investigation Area. This response only applies to the Wacker Substation, located at 7200 NW Front Avenue, Portland, Oregon.	
a. Currently Owns	Not applicable. PGE does not own the Wacker Substation property. PGE does, however, own the equipment that is used at the Wacker Substation	
b. Currently Leases	Not applicable. PGE does not lease the Wacker Substation.	
c. Currently Operates	PGE currently operates the Wacker Substation; see the attached document (Q04c_Wacker Substation Layout.pdf). PGE obtained a perpetual easement to install and maintain an electric power substation from the property owner, Wacker Siltronic Corporation (hereafter referred to as Wacker Siltronic), on October 12, 1978. The details of this arrangement are located in the document (Q07_Wacker_Easement_10-12-1978.pdf) attached in response to Question 7.	Question 4 Attachment Q04c_Wacker Substation Layout.pdf Also see Question 7 Attachment Q07_Wacker_Easement_10-12-1978.pdf
d. Currently otherwise affiliated with	PGE obtained a perpetual easement to install and maintain the Wacker Substation in exchange for the supply and delivery of electric power to the Wacker Siltronic manufacturing facility. See the document (Q04c_Wacker Substation Layout.pdf) attached in response to Question 4c. The details of this arrangement are located in the document (Q07_Wacker_Easement_10-12-1978.pdf) attached in response to Question 7.	Question 4 Attachment Q04c_Wacker Substation Layout.pdf Also see Question 7 Attachment Q07_Wacker_Easement_10-12-1978.pdf
e. Historically Has Owned	Not applicable. PGE has never owned the Wacker Substation property.	
f. Historically Has Leased	Not applicable. PGE has never leased the Wacker Substation.	
g. Historically Has Operated	Not applicable. PGE currently operates the Wacker Substation. See the response to Question 4c.	
h. Historically otherwise affiliated with	Not applicable. PGE was not historically affiliated with the Wacker Substation property prior to obtaining the perpetual easement for the property in 1978.	
5. Provide a brief summary of Respondent's relationship to each Property listed in response to Question 4 above, including the address, Multnomah County Alternative Tax lot Identification number(s), dates of acquisition, period of		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
ownership, lease, operation, or affiliation, and a brief overview of Respondent's activities at the Properties identified.		
a. Relationship	PGE is the operator of the Wacker Substation.	
b. Address	7200 NW Front Avenue Portland, Oregon 97210	
c. Multnomah County Alternative Tax ID #	The Wacker Substation is located on a portion of R961130010. See the attached documents and the document attached in response to Question 4c	Question 5 Attachments Q05c_Wacker TaxMap.pdf Q05c_Wacker Property Details.pdf Also see Question 4 Attachment Q04c_Wacker Substation Layout.pdf
d. Date Acquired (leased)	PGE's easement for the Wacker Substation was granted on October 12, 1978	
e. Period of Lease	Not applicable. PGE has an easement for the substation.	
f. Period of Ownership, Lease or Operation	PGE has operated the substation from its construction sometime after October 12, 1978 to the present.	
g. Activities	In 1978, a perpetual easement for the Wacker Substation property was granted to PGE by Wacker Siltronic. Substation construction began in 1978 and since then, the substation has undergone equipment upgrades and modifications, as needed. PGE has used the property exclusively for substation operations since 1978. Wacker Substation Purpose: <ul style="list-style-type: none"> • Provide continuous electrical power to customer, Wacker Siltronic; and • Protect public, customer, and equipment from electrical and mechanical faults. Wacker Substation Function: As a distribution substation - engineered and crafted collection of high voltage equipment, which transforms higher sub-transmission voltage (57kv) to lower distribution voltage (11kv and 4kv). High voltage switches and circuit breakers allow the circuits to be safely opened for routine maintenance or to interrupt electrical faults. Automatic operation is achieved through control, protection, telemetry, and communication systems located within the substation. As such, on-site activities are limited to maintenance, repair, and replacement of substation components as they are needed.	
6. Identify any persons who concurrently with you exercises or exercised actual control or who held significant authority to control activities at each Property, including:		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
a. partners or joint ventures;	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, there are no known partners or joint ventures that have exercised actual control or held significant authority to control activities at the Wacker Substation.	
b. any contractor, subcontractor, or licensor that exercised control over any materials handling, storage, or disposal activity on the Property; (service contractors, remediation contractors, management and operator contractors, licensor providing technical support to licensed activities);	To the best of PGE's knowledge, after reasonable inquiry, no consultants or subcontractors have exercised control over any materials handling, storage, or disposal activities on the property.	
c. any person subleasing land, equipment or space on the Property;	Not applicable. Wacker Siltronic owns the property. To the best of PGE's knowledge, after reasonable inquiry, there are no subleases for land, equipment, or space on the property.	
d. utilities, pipelines, railroads and any other person with activities and/or easements regarding the Property;	Wacker Siltronic owns the property. To the best of PGE's knowledge, after reasonable inquiry, there are no other utilities, pipelines, railroads, or easements within the Wacker Substation, other than the PGE easement and utilities.	
e. major financiers and lenders;	Not applicable. None have been identified.	
f. any person who exercised actual control over any activities or operations on the Property;	To the best of PGE's knowledge, after reasonable inquiry, other than PGE personnel (see responses to Questions 6g and 6h), no other persons have exercised actual control over activities or operations at the property.	
g. any person who held significant authority to control any activities or operations on the Property;	<p>As outlined in the easement (Q07_Wacker_Easement_10-12-1978.pdf) attached in response to Question 7, Wacker Siltronic has the authority to use the Wacker Substation property for all purposes not inconsistent with the uses and purposes of the property as outlined in the easement. Wacker Siltronic also holds the authority to approve or deny approval of all underground electric power lines installed after the initial installation of the PGE operated substation.</p> <p>In addition to the property owner, Wacker Siltronic, multiple individuals have had authority within PGE to access and conduct activities on this Property. Many are listed on the following attached documents:</p> <ul style="list-style-type: none"> • Bullseye article from 1980. • Organizational charts for the years: 1980, 1982, 1984, 1986, 1988, 1989, 1990, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, and 2005 • Distribution and System Planning information. • Management structure information 1982-2007. 	<p>Question 6 Attachments Q06g_1980 Bullseye Article.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System PlanningInformation.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIC Structure Info 1982-2007.pdf</p> <p>Also see Question 7 Attachment Q07_Wacker_Easement_10-12-1978.pdf</p>
h. any person who had a significant presence or who conducted significant activities at the Property; and	To the best of PGE's knowledge, after reasonable inquiry, only PGE personnel have had a significant presence or conducted significant activities at the property since PGE was granted the easement for the property in 1978 from Wacker Siltronic.	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	See the information contained in the response to Question 6f and the documents attached in the response to Question 6g.	
i. government entities that had proprietary (as opposed to regulatory) interest or involvement with regard to the activity on the Property.	To the best of PGE's knowledge, after reasonable inquiry, no known government entities have (or had) a proprietary interest or involvement at the Wacker Substation since PGE was granted the easement in 1978.	
Section 2.0 - Owner/Operator Information (continued)		
7. Identify and describe any legal or equitable interest that you now have, or previously had in each Property. Include information regarding the nature of such interest: when, how, and from whom such interest was obtained; and when, how, and to whom such interest was conveyed, if applicable. In addition, submit copies of all instruments evidencing the acquisition or conveyance of such interest (e.g., deeds, leases, purchase and sale agreements, partnership agreements, etc.). Also provide all information and documentation regarding, but not limited to the following:	<p>See the responses to Questions 4 and 5, above.</p> <p>PGE is not the property owner. PGE operates the Wacker Substation under a perpetual easement, which was granted to PGE on October 12, 1978 from Wacker Siltronic. See the attached document (Q07_Wacker_Easement_10-12-1978.pdf).</p> <p>Also attached is the City of Portland vacating ordinance (Q07_1978 COP Vacating Ord for Wacker.pdf), passed on July 27, 1978, which ordained the vacating of a portion of NW Front Avenue lying between a point near NW St Helens Road and the southeasterly line of the Spokane, Portland and Seattle Railway Co (Burlington Northern) right of way to provide a suitable site for the proposed Wacker Siltronic Corporation development.</p>	<p>Question 7 Attachments Q07_Wacker_Easement_10-12-1978.pdf Q07_1978 COP Vacating Ord for Wacker.pdf</p>
a. any deeds and/or transfer information between Respondent and Dulien Steel Products;	Not applicable. Question 7(a) is relevant only to the Rivergate North Substation. Information regarding this question is provided in the 104(e) response letter for that site.	
b. deed and title information for Parcels R971340160, R971340180, R971350100, R971350480, R941191230, R971340130 and R971340200;	Not applicable to the Wacker Substation.	
c. a complete copy of the Memorandum of Contract Book 1292 p.616 for parcel R941191230, dated September 5, 1978;	Not applicable to the Wacker Substation.	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>8. If you are the current owner and/or current operator, did you acquire or operate the Property or any portion of the Property after the disposal or placement of hazardous substances, waste, or materials on, or at the Property? Describe all of the facts on which you base the answer to this question.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, PGE had/has no information related to the disposal or placement of hazardous substances, waste, or materials on or at any part of the Wacker Substation easement property at the time that PGE acquired the easement from Wacker Siltronic. To the best of PGE’s knowledge, after reasonable inquiry, no site investigations were performed on the Wacker Substation easement property prior to PGE acquiring the easement.</p>	
<p>9. At the time you acquired or operated the Property, did you know or have reason to know that any hazardous substance, waste, or material was disposed of on, or at the Property? Describe all investigations of the Property you undertook prior to acquiring the Property and all of the facts on which you base the answer to this question.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, PGE had/has no information related to the disposal or placement of hazardous substances, waste, or materials on or at any part of the Wacker Substation easement property at the time that PGE acquired the easement from Wacker Siltronic. To the best of PGE’s knowledge, after reasonable inquiry, no site investigations were performed on the Wacker Substation easement property prior to PGE acquiring the easement.</p>	
<p>10. Identify all prior owners that you are aware of for each Property identified in Response to Question 4 above. For each prior owner, further identify if known:</p> <p>a. The dates of ownership</p> <p>b. All evidence showing that they controlled access to the Property</p> <p>c. All evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at the Property during the period that they owned the Property.</p>	<p>PGE’s easement to construct and operate the Wacker Substation was granted in 1978 by the current owner, Wacker Siltronic. To the best of PGE’s knowledge, after reasonable inquiry, PGE has no information regarding the ownership history of the Wacker Substation easement property before 1978.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, no site investigations were performed on the Wacker Substation easement property prior to PGE acquiring the easement. To the best of PGE’s knowledge, after reasonable inquiry, there is no record that PGE had information related to the release or threatened release of a hazardous substance, pollutant, or contaminant at the Wacker Substation easement property prior to PGE acquiring the easement.</p>	
<p>11. Identify all prior operators of the Property, including lessors, you are aware of for each Property identified in response to Question 4 above. For each</p>	<p>PGE’s easement to construct and operate the Wacker Substation was granted in 1978 by the current owner, Wacker Siltronic. To the best of PGE’s knowledge, after reasonable inquiry, PGE has no information regarding the Wacker Siltronic operations on the Wacker Substation easement property prior to 1978 or the operators/operations before Wacker Siltronic.</p>	

104(e) Response
Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>such operator, further identify if known:</p> <p>a. the dates of operation;</p> <p>b. the nature of prior operations at the Property;</p> <p>c. all evidence that they controlled access to the Property; and</p> <p>d. all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the Property during the period that they were operating the Property</p>		
<p>12. If not included in response to any of the previous questions, please describe the purpose and duration of each aquatic lands lease Respondent or the operator of Respondent's Property(ies) ever obtained from the State of Oregon and provide a copy of each application for and aquatic lands lease obtained.</p>	<p>The Wacker Substation is not adjacent to the Willamette River. To the best of PGE's knowledge, after reasonable inquiry, no aquatic lands lease is or has been associated with the Wacker Substation.</p>	
<p>Section 3.0 - Description of Each Property</p>		
<p>13. Provide the following information about each Property identified in response to Question 4:</p>		
<p>a. property boundaries, including a written legal description;</p>	<p>The Wacker Substation is located in the north half of Section 13 and the south half of Section 12 in Township 1 North, Range 1 West of the Willamette Meridian, in the City of Portland, County of Multnomah, State of Oregon. Please see the document (Q07_Wacker_Easement_10-12-1978.pdf) attached in response to Question 7 and the documents attached in response to Question 5c.</p>	<p>See Question 5 Attachments Q05c_Wacker TaxMap.pdf Q05c_Wacker Property Details.pdf</p> <p>Also see Question 7 Attachment Q07_Wacker_Easement_10-12-1978.pdf</p>
<p>b. location of underground utilities (telephone, electrical, sewer, water main,</p>	<p>The attached documents (Q13b_2006 Wacker General Layout.pdf, Q13b_1982 Wacker Operation One-Line Diagram.pdf and Q13b_2006 Wacker Conduit Plan.pdf) show the</p>	<p>Question 13 Attachments Q13b_2006 Wacker General Layout.pdf (CEII¹)</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
etc.);	<p>approximate location of the above ground and underground electrical utilities at the Wacker Substation. To the best of PGE's knowledge, after reasonable inquiry, PGE owns the electrical equipment within the boundaries of the substation fence and Wacker Siltronic owns them outside of the substation fence.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, and based on the attached map from Portland Maps (Q13b_Wacker_Sewer-Storm.pdf), there are no municipal sewer lines within the Wacker Substation. To the best of PGE's knowledge, after reasonable inquiry, there is no municipal water service to the property. However, there are PGE stormwater drainage pipes associated with the stormwater control and secondary spill containment system within Wacker Substation, as described in response to Questions 13i and 19 and shown in the documents (Q19_1995 Wacker Oil Containment Plan and Details.pdf, Q19_1998 Wacker Oil Spill Containment.pdf, Q19_2000 Wacker SPCC.pdf, and Q19_2009 Facility Diagram.pdf) attached in response to Question 19.</p>	<p>Q13b_1982 Wacker Operation One-Line Diagram.pdf Q13b_2006 Wacker Conduit Plan.pdf (CEII¹) Q13b_Wacker_Sewer-Storm.pdf</p> <p>Also see Question 19 Attachments Q19_1995 Wacker Oil Containment Plan and Details.pdf (CEII¹) Q19_1998 Wacker Oil Spill Containment.pdf (CEII¹) Q19_2000 Wacker SPCC.pdf Q19_2009 Facility Diagram.pdf (CEII¹)</p>
c. location of all underground pipelines whether or not owned, controlled or operated by you;	Please see the response provided for Question 13b.	
d. surface structures (e.g., buildings, tanks, pipelines, etc.);	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE owns the electrical equipment within the boundaries of the substation fence and Wacker Siltronic owns them outside of the substation fence. In addition to concrete pulling/sectionalizing vaults and poles, the following is a description of the other structures located at the Wacker Substation.</p> <p><i>Buildings:</i></p> <ul style="list-style-type: none"> • Control building – houses telemetry and control equipment. <p><i>Structures:</i></p> <ul style="list-style-type: none"> • Transmission structure – supports high voltage conductors and switches. • Distribution structure – supports medium voltage conductors and switches. <p><i>Equipment:</i></p> <ul style="list-style-type: none"> • Two power transformers • One station service transformer • Eight metering transformers <p>Electrical equipment and surface structures are shown in the documents (Q13b_2006 Wacker General Layout.pdf, Q13b_1982 Wacker Operation One-Line Diagram.pdf and Q13b_2006 Wacker Conduit Plan.pdf) attached in response to Question 13b.</p>	<p>Question 13 Attachments Q13b_2006 Wacker General Layout.pdf (CEII¹) Q13b_1982 Wacker Operation One-Line Diagram.pdf Q13b_2006 Wacker Conduit Plan.pdf (CEII¹)</p>
e. over-water structures (e.g., piers, docks, cranes, etc.);	There are no over-water structures at the Wacker Substation.	
f. dry wells;	To the best of PGE's knowledge, after reasonable inquiry, there are no dry wells at the Wacker Substation.	
g. treatment or control devices (e.g.,	Other than the stormwater control and secondary spill containment system described in	

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response
Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>surface water, air, groundwater, Resource Conservation and Recovery Act (RCRA), Transfer, Storage, or Disposal (TSD), etc.);</p>	<p>response to Questions 13i and 19, there are no other treatment or control devices at the Wacker Substation.</p>	
<p>h. groundwater wells, including drilling logs;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, there are no groundwater wells at the Wacker Substation.</p>	
<p>i. stormwater drainage system, and sanitary sewer system, past and present, including septic tank(s) and where, when and how such systems are emptied and maintained;</p>	<p>The Wacker Substation property is sloped to the north. To the best of PGE’s knowledge, after reasonable inquiry, PGE was unable to locate any records describing the sites’ stormwater drainage prior to 1985; however, it is reasonable to assume it infiltrated through the gravel surface at the Wacker Substation.</p> <p>A stormwater and secondary spill containment system was installed around the oil-filled electrical equipment by 1985. The purpose of secondary spill containment system is to contain oil from power equipment in case of leaks or failures. See the response and documents (Q19_1995 Wacker Oil Containment Plan and Details.pdf, Q19_1998 Wacker Oil Spill Containment.pdf, Q19_2000 Wacker SPCC.pdf, Q19_Spill Containment Construction.pdf, and Q19_Spill Containment Deflector Details.pdf) attached to Question 19.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, from at least 1985 until approximately 1995, site stormwater within the stormwater and secondary spill containment system was drained into the sites’ drainage trenches with perforated pipe and then infiltrated through the gravel surface at the Wacker Substation. To the best of PGE’s knowledge, after reasonable inquiry, precipitation falling outside the stormwater control and secondary spill containment system infiltrates through the gravel surface.</p> <p>Starting in 1995 and completed by 1998, PGE upgraded the stormwater control and secondary spill containment system. See the documents (Q19_1995 Wacker Oil Containment Plan and Details.pdf, Q19_1998 Wacker Oil Spill Containment.pdf, Q19_2000 Wacker SPCC.pdf, Q19_Spill Containment Construction.pdf, Q19_Spill Containment Deflector Details.pdf and Q19_2009 Facility Diagram.pdf) attached in response to Question 19. Upgrades included:</p> <ul style="list-style-type: none"> • Removal, cleaning, relocation, and re-installation of drainage piping. • Removal of existing trench material, installation of new liner, backfill with trench material, and installation of filter liner. • Removal of perforated pipe and replacement with new non-perforated pipe. • Installation of an oil/water separator. • Re-grading of the substation surface. <p>Precipitation falling within the upgraded stormwater control and secondary spill containment system flows through non-perforated piping to an oil/water separator, then discharges to pipes</p>	<p>Question 13 Attachment Q13b_Wacker_Sewer-Storm.pdf</p> <p>Also see Question 19 Attachments Q19_1995 Wacker Oil Containment Plan and Details.pdf (CEII¹) Q19_1998 Wacker Oil Spill Containment.pdf (CEII¹) Q19_2000 Wacker SPCC.pdf Q19_Spill Containment Construction.pdf Q19_Spill Containment Deflector Details.pdf Q19_2009 Facility Diagram.pdf (CEII¹)</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>outside of the Wacker Substation. The Spill Prevention, Control, and Countermeasure (SPCC) Plan (Q19_2000 Wacker SPCC.pdf), attached in response to Question 19, incorrectly shows on Attachment A (page 11) that the pipe discharges to the Willamette River. To the best of PGE's knowledge, after reasonable inquiry, stormwater from within the upgraded stormwater control and secondary spill containment system flows through non-perforated piping to an oil/water separator, and then discharges to Wacker Siltronic's storm system. The revised diagram (Q19_2009 Facility Diagram.pdf) shows the correct destination. This error is being corrected in the SPCC plan currently under development.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE is unaware whether or not the Wacker Siltronic storm system discharges to the Willamette River.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, precipitation falling outside the upgraded stormwater control and secondary spill containment system infiltrates through the gravel surface.</p>	
<p>j. subsurface disposal field(s), Underground Injection Control (UIC) wells, and other underground structures (e.g., underground storage tanks (USTs); and where they are located, if they are still used, and how they were closed.</p>	<p>Other than the stormwater control and secondary spill containment system perforated pipes (present from 1985 until approximately 1995) and oil/water separator (present from approximately 1995 through present) described in response to Questions 13i and 19, there are no known subsurface disposal fields, Underground Injection Control (UIC) wells, or other underground structures at the Wacker Substation.</p>	
<p>k. any and all major additions, demolitions or changes on, under or about the Property, its physical structures or to the Property itself (e.g., stormwater drainage, excavation work); and any planned additions, demolitions or other changes to the Property;</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the Wacker Substation has undergone a series of modifications since the substation was constructed in 1978/1979. Major modifications include:</p> <ul style="list-style-type: none"> • Initial substation construction and installation of electrical equipment in 1978/1979. • Installation of a stormwater and secondary spill containment system by 1985. • Electrical equipment upgrades (removal of obsolete equipment and installation of new equipment) from 1992 to 1995. • Extension of the yard fence to the south, change in the location of the line potential device foundation and safety guard posts, and the replacement of most slabs and footings for electrical equipment including the excavation and removal of soil/concrete in 1995/1996. • Upgrades to the stormwater and secondary spill containment system were completed by 1998. <p>See the response to Question 13d for a description of the substation structures. See the attached document (Q13k_1995 Fence and Location Plan.pdf) and the documents (Q19_1995 Wacker Oil Containment Plan and Details.pdf, Q19_1998 Wacker Oil Spill Containment.pdf,</p>	<p>Question 13 Attachments Q13k_1995 Fence and Location Plan.pdf (CEII¹) Q13k_Wacker List of Materials.pdf</p> <p>Also see Question 19 Attachments Q19_1995 Wacker Oil Containment Plan and Details.pdf (CEII¹) Q19_1998 Wacker Oil Spill Containment.pdf (CEII¹) Q19_2000 Wacker SPCC.pdf Q19_Spill Containment Construction.pdf Q19_Spill Containment Deflector Details.pdf</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	Q19_2000 Wacker SPCC.pdf, Q19_Spill Containment Construction.pdf, and Q19_Spill Containment Deflector Details.pdf) attached in response to Question 19. Also see the attached document (Q13k_Wacker List of Materials.pdf), which list the materials for electrical arrangement added and removed since 1978.	
l. all maps and drawings of the Property in your possession; and	See the figures attached in response to other questions herein.	
m. all aerial photographs of the Property in your possession.	Aerial photographs are available at Google Maps, Google Earth, and Portland Maps. Aerial photographs that were available on Portland Maps are attached.	Question 13 Attachments Q13m_WackerAerial_2001.pdf Q13m_WackerAerial_2002.pdf Q13m_WackerAerial_2003.pdf Q13m_WackerAerial_2004.pdf Q13m_WackerAerial_2005.pdf Q13m_WackerAerial_2006.pdf Q13m_WackerAerial_2007.pdf
n. all information requested in (a) through (m) above regarding, but not limited to, the following:		
i. the Portland General Electric Station L location on 1841 SE Water Ave;	See the separate 104(e) response for Station L.	
ii. the Portland General Electric Station E location on 2635 NW Front Ave;	See the separate 104(e) response for Station E.	
iii. the Portland General Electric Station N location on 6616 N Lombard St.;	See the separate 104(e) response for Station N.	
14. For Properties adjacent to the Willamette River, provide specific information describing the river-ward boundary of private ownership and where state aquatic lands and/or state-management jurisdiction begins. Provide a map that delineates the river-ward boundary of each Property.	Not applicable. The Wacker Substation is not adjacent to the Willamette River.	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>15. For each Property, provide all reports, information or data you have related to soil, water (ground and surface), or air quality and geology/hydrogeology at and about each Property. Provide copies of all documents containing such data and information, including both past and current aerial photographs as well as documents containing analysis or interpretation of such data.</p>	<p>The SPCC plan (Q19_2000 Wacker SPCC.pdf), attached in response to Question 19, briefly discusses topography and soil condition at the Wacker Substation.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, there are no other reports, information, or data related to soil, water, air quality, or geology/hydrogeology at the Wacker Substation.</p> <p>In conjunction with the Wacker Substation enlargement and upgrading conducted between 1995 and 1998, PGE installed power poles outside of the Wacker Substation easement property but on property owned by Wacker Siltronic. Subsurface material (soil and liquid/sludge) was excavated during the power pole installations. A composite of excavated soil was tested for PCBs and found to be non-detect, see the attached document (Q15_1995-11-02_Wacker Soil Lab Results.pdf). The liquid/sludge was tested for total petroleum hydrocarbons, volatile organic compounds, and metals; see the attached document (Q15_1996-05-15_Wacker Sludge Results.pdf). The Wacker Siltronic property, including the Wacker Substation, is a DEQ cleanup site (ECSI # 183). To the best of PGE’s knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p>	<p>Question 15 Attachments Q15_1995-11-02_Wacker Soil Lab Results.pdf Q15_1996-05-15_Wacker Sludge Results.pdf</p> <p>Also see Question 19 Attachment Q19_2000 Wacker SPCC.pdf</p>
<p>16. Identify all past and present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) on each Property. For each such unit or area, provide the following information:</p> <p>a. a map showing the unit/area’s boundaries and the location of all known units/areas whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the location and size of all past and present units/areas;</p> <p>b. dated aerial photograph of the site showing each unit/area;</p>	<p>Not applicable. To the best of PGE’s knowledge, after reasonable inquiry, there are no past or present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) at the Wacker Substation easement property.</p>	

104(e) Response
Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>c. the type of unit/area (e.g., storage area, landfill, waste pile, etc.), and the dimensions of the unit/area;</p> <p>d. the dates that the unit/area was in use;</p> <p>e. the purpose and past usage (e.g., storage, spill containment, etc.);</p> <p>f. the quantity and types of materials (hazardous substances and any other chemicals) located in each unit/area and;</p> <p>g. the construction (materials, composition), volume, size, dates of cleaning, and condition of each unit/area.</p>		
<p>17. If the unit/area described above is no longer in use, how was such unit/area closed and what actions were taken to prevent or address potential or actual releases of waste constituents from the unit/area.</p>	<p>Not applicable to the Wacker Substation easement property.</p>	
<p>18. For each Property, provide the following information regarding any current or former sewer or storm sewer lines or combined sanitary/storm sewer lines, drains, ditches, or tributaries discharging into the Willamette River:</p>		
<p>a. the location and nature of each sewer line, drain, ditch, or tributary;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, and based on the map from Portland Maps (Q13b_Wacker_Sewer-Storm.pdf), attached in response to Question 13b, there are no municipal sewer, storm sewer, or combined sanitary/storm sewer lines, drains, ditches, or tributaries within the Wacker Substation easement property. To the best of PGE’s knowledge, after reasonable inquiry, there is no municipal water service to the Wacker Substation easement property.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, since 1995/1998, stormwater from within the upgraded stormwater control and secondary spill containment system flows through</p>	<p>See Question 13 Attachment Q13b_Wacker_Sewer-Storm.pdf</p> <p>Also see Question 19 Attachments Q19_1998 Wacker Oil Spill Containment.pdf (CEII¹) Q19_2000 Wacker SPCC.pdf Q19_2009 Facility Diagram.pdf (CEII¹)</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>non-perforated piping to an oil/water separator, then discharges to Wacker Siltronic's storm system. To the best of PGE's knowledge, after reasonable inquiry, PGE is unaware whether or not the Wacker Siltronic storm system discharges to the Willamette River.</p> <p>As discussed in response to Question 13i, the SPCC Plan (Q19_2000 Wacker SPCC.pdf), attached in response to Question 19, incorrectly shows on Attachment A (page 11) stormwater from within the upgraded stormwater control and secondary spill containment system flow to a pipe that discharges to the Willamette River. The revised diagram (Q19_2009 Facility Diagram.pdf) shows the correct destination. This error is being corrected in the SPCC plan currently under development.</p> <p>See the documents (Q19_1998 Wacker Oil Spill Containment.pdf, Q19_2000 Wacker SPCC.pdf, Q19_2009 Facility Diagram.pdf) attached in response to Question 19.</p>	
<p>b. the date of construction of each sewer line, drain, ditch, or tributary;</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the date of construction for the storm line located just outside of the property, to which the Wacker Substation's oil water separator (part of the stormwater and secondary spill containment system) connects.</p> <p>The Wacker Substation stormwater and secondary spill containment non-perforated piping and oil/water separator were constructed onsite sometime between 1995 and 1998. See the documents (Q19_1995 Wacker Oil Containment Plan and Details.pdf, Q19_1998 Wacker Oil Spill Containment.pdf, Q19_2000 Wacker SPCC.pdf, Q19_Spill Containment Construction.pdf, Q19_2009 Facility Diagram.pdf) attached in response to Question 19.</p>	<p>See Question 19 Attachments Q19_1995 Wacker Oil Containment Plan and Details.pdf (CEII¹) Q19_1998 Wacker Oil Spill Containment.pdf (CEII¹) Q19_2000 Wacker SPCC.pdf Q19_Spill Containment Construction.pdf</p>
<p>c. whether each sewer line, or drain was ever connected to a main trunk line;</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, and based on the map from Portland Maps (Q13b_Wacker_Sewer-Storm.pdf), attached in response to Question 13b, the pipes associated with the stormwater control and secondary spill containment system do not directly connect to a municipal main trunk line.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE is unaware whether or not the Wacker Siltronic storm system, to which the stormwater from within the Wacker Substation stormwater control and secondary spill containment system discharges, is or was ever connected to a municipal main trunk line.</p>	<p>See Question 13 Attachment Q13b_Wacker_Sewer-Storm.pdf</p>
<p>d. whether each sewer line, drain, ditch, or tributary drained any hazardous substance, waste, material or other process residue to the Willamette River; and</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, other than the discharge of site stormwater from within the stormwater control and secondary spill containment system to the Wacker Siltronic storm system, after pretreatment through the site's oil/water separator, PGE is unaware of the discharge of any other waste, material, or process residue from the Wacker Substation. To the best of PGE's knowledge, after reasonable inquiry, PGE is unaware whether or not the Wacker Siltronic storm system discharges to the Willamette River. See the response to Questions 13i and 19 for further details.</p>	

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response
Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>e. any documentation regarding but not limited to the following on any and all outfalls to the Willamette River which are located within the boundaries of the Property(ies). Your response should include, but not be limited to:</p> <p>i. the areas serviced by the outfalls; and</p> <p>ii. the type of outfall (i.e., stormwater or single facility operational).</p>	<p>Not applicable. The Wacker Substation has no outfalls to the Willamette River within its borders.</p> <p>As previously discussed, since approximately 1995, stormwater from within the stormwater control and secondary spill containment system flows is pretreated through the site’s oil/water separator and then discharges to the Wacker Siltronic storm system. To the best of PGE’s knowledge, after reasonable inquiry, PGE is unaware whether or not the Wacker Siltronic storm system discharges to the Willamette River. See the response to Question 13i and 19 for further details.</p>	
<p>19. Provide copies of any stormwater or property drainage studies, including data from sampling, conducted at these Properties on stormwater, sheet flow, or surface water runoff. Also provide copies of any Stormwater Pollution Prevention, Maintenance Plans or Spill Plans developed for different operations during the Respondent’s operation of each Property.</p>	<p>The Wacker Substation SPCC Plan (Q19_2000 Wacker SPCC.pdf), as well as site-specific spill containment figures and details, are attached. The SPCC Plan incorrectly shows on Attachment A (page 11) that precipitation falling within the upgraded stormwater control and secondary spill containment system flows through non-perforated piping to an oil/water separator, then discharges to pipes outside of the Wacker Substation, within the Wacker Siltronic property, which subsequently discharge to the Willamette River. To the best of PGE’s knowledge, after reasonable inquiry, stormwater from within the upgraded stormwater control and secondary spill containment system flows through non-perforated piping to an oil/water separator, then discharges to Wacker Siltronic’s storm system. To the best of PGE’s knowledge, after reasonable inquiry, PGE is unaware whether or not the Wacker Siltronic storm system discharges to the Willamette River.</p> <p>The SPCC Plan for the Wacker Substation is currently undergoing revision. The attached SPCC Facility Diagram (Q19_2009 Facility Diagram.pdf) shows the current oil containment system details, including the stormwater discharge to the Wacker Siltronic storm system.</p> <p>The SPCC plans and associated figures are utilized by PGE to ensure that the Property has adequate operating procedures that prevent oil spills, control measures installed to prevent a spill from reaching navigable waters, and countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters. The oil containment system, which includes the stormwater and secondary spill containment system, captures and contains oil from power equipment in case of leaks or failures. The stormwater and secondary spill containment system is discussed in more detail in the response to Question 13i.</p> <p>General PGE spill clean up procedures are described in the attached documents (Q19_Environmental Services Oil Spill Instruction.pdf, Q19_Oil Spill Cleanup Procedures.pdf, Q19_Oil Spill Response Team.pdf, and Q19_Oil Spill First Response.pdf).</p>	<p>Question 19 Attachments</p> <ul style="list-style-type: none"> Q19_2000 Wacker SPCC.pdf Q19_1998 Wacker Oil Spill Containment.pdf (CEII¹) Q19_1995 Wacker Oil Containment Plan and Details.pdf (CEII¹) Q19_Spill Containment Construction.pdf Q19_Spill Containment Deflector Details.pdf Q19_Oil Spill First Response.pdf Q19_Oil Spill Response Team.pdf Q19_Environmental Services Oil Spill Instruction.pdf Q19_Oil Spill Cleanup Procedures.pdf Q19_2009 Facility Diagram.pdf (CEII¹)

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

104(e) Response
Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	Other than evaluation for SPCC requirements, to the best of PGE’s knowledge, after reasonable inquiry, no drainage studies have been performed at the Wacker Substation.	
Section 4.0 - Respondent's Operational Activities		
20. Describe the nature of your operation or business activities at each Property. If the operation or business activity changed over time, please identify each separate operation or activity, the dates when each operation or activity was started and, if applicable, ceased.	PGE has operated the Wacker Substation since 1978 through a perpetual easement with Wacker Siltronic. See the response to Question 5g for a description of the activities performed at the Wacker Substation. The purpose of the Wacker Substation is to provide continuous electrical power to customer, Wacker Siltronic, and to protect the public, customer, and equipment from electrical and mechanical faults.	
21. At each Property, did you ever use, purchase, generate, store, treat, dispose, or otherwise handle any waste, or material? If the answer to the preceding question is anything but an unqualified "no," identify:		
a. in general terms, the nature and quantity of the waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;	<p>Most of the functions in a substation are automatic and occur without direct supervision. No wastes, including municipal wastes, are generated during regular operations. Periodically, equipment is taken out of service for maintenance. During these periods, waste material is generated. The primary materials used for maintenance include transformer oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid and paint. Soil and gravel removed from PGE properties during excavation from equipment spill response or remediation are tested and disposed of appropriately, as needed.</p> <p>In 1995, PGE commenced enlarging and upgrading the Wacker Substation, for details of the major modification see the response to Question 13k. As part of the enlargement and upgrading, cement demolition waste was tested for potential PCB contamination prior to disposal. Approximately 20 cubic yards of non-hazardous cement demolition waste was disposed of at Hillsboro Landfill. See the document (Q21c_1996-03-01_Cement Demo Waste.pdf) attached in response to Question 21c.</p> <p>In conjunction with the Wacker Substation enlargement and upgrading, PGE installed power poles outside of the Wacker Substation easement property but on property owned by Wacker Siltronic. Soil and liquid/sludge were excavated during the power pole installations. The excavated soil and liquid/sludge were tested in 1995/1996; see the documents (Q15_1995-11-02_Wacker Soil Lab Results.pdf and Q15_1996-05-15_Wacker Sludge Results.pdf) attached in response to Question 15. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE’s knowledge, after reasonable inquiry, Wacker</p>	<p>Question 21 Attachments Q21a_2008_Oil Filled Equipment.pdf Q21a_1986_Oil Filled Equipment.pdf Q21a_Waste Stream Summary.pdf Q21c_1996-03-01_Cement Demo Waste.pdf</p> <p>Also see Question 15 Attachments Q15_1995-11-02_Wacker Soil Lab Results.pdf Q15_1996-05-15_Wacker Sludge Results.pdf</p> <p>Also see Question 33 Attachment Q33_08 EMC List.pdf</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p>

104(e) Response
 Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p> <p>See the attached document (Q21a_2008_Oil Filled Equipment.pdf) for the list of oil-filled substation equipment currently at the Wacker Substation. The document identifies the position of the oil filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. Several of the oil-filled equipment listed in the document (Q21a_2008_Oil Filled Equipment.pdf) are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978.</p> <p>Also see the attached document (Q21a_1986_Oil Filled Equipment.pdf) for the list of oil-filled substation equipment at the Wacker Substation in 1986. This document indicates that the WR1 transformer, sampled in October 1980, had a total PCB concentration of 22 ppm. As shown in the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, the current WR1 transformer was installed in 1996 and has an assumed total PCB concentration of less than 1.</p> <p>The products/materials currently used at PGE properties within Oregon and potentially used at the Wacker Substation are listed in the document (Q33_08 EMC List.pdf) attached in response to Question 33. Material Safety Data Sheets (MSDS) are provided in a supplemental submittal (Supplemental Submittal S2). Products/materials used in the past are similar to those used currently.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, those companies/persons with whom PGE currently has arrangements for disposal/recycling/destruction of wastes and/or used material are listed in the attached document (Q21a_Waste Stream Summary.pdf). The document summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal/recycling facility. To the best of PGE’s knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40.</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>b. the chemical composition, characteristics, physical state (e.g., solid, liquid) of each waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;</p>	<p>The primary materials used for maintenance include transformer oil (liquid), solvents (liquid), denatured alcohol (liquid), degreasers (liquid), lubricating grease (semi-liquid), hydraulic fluid (liquid) and paint (liquid). The chemical composition, characteristics, and physical state of materials potentially used at the Site are described in the MSDS documents for the products/materials currently used at PGE properties within Oregon, which are provided in a supplemental submittal (Supplemental Submittal S2).</p> <p>In 1995, PGE commenced enlarging and upgrading the Wacker Substation, for details of the major modification see the response to Question 13k. As part of the enlargement and upgrading, cement demolition waste was tested for potential PCB contamination prior to disposal. Approximately 20 cubic yards of non-hazardous cement demolition waste (solid) was disposed of at Hillsboro Landfill. See the document (Q21c_1996-03-01_Cement Demo Waste.pdf) attached in response to Question 21c.</p> <p>In conjunction with the Wacker Substation enlargement and upgrading, PGE installed power poles outside of the Wacker Substation easement property but on property owned by Wacker Siltronic. Soil (solid) and liquid/sludge (liquid) were excavated during the power pole installations. The excavated soil and liquid/sludge were tested in 1995/1996; see the documents (Q15_1995-11-02_Wacker Soil Lab Results.pdf and Q15_1996-05-15_Wacker Sludge Results.pdf) attached in response to Question 15. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p> <p>Soil (solid) and gravel (solid) removed from PGE properties during excavation from equipment spill response or remediation are tested and disposed of appropriately, as needed.</p> <p>Also see the documents attached in response to Question 21c, below.</p>	<p>Question 21 Attachment Q21c_1996-03-01_Cement Demo Waste.pdf</p> <p>Also see Question 15 Attachment Q15_1995-11-02_Wacker Soil Lab Results.pdf Q15_1996-05-15_Wacker Sludge Results.pdf</p>
<p>c. how each such waste or material was used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you; and</p>	<p>No waste or materials are/were stored on site. Historically, wastes and used materials from within the Investigation Area were transported either directly to the appropriate disposal facility or to one of PGE's waste and material handling facilities at Harborton Substation (located at 12500 NW Marina Way, Portland, OR), Sellwood Substation (located at 8856 SE 13TH AVE), PSC (located at 3700 SE 17th Ave, Portland, Oregon), or Wilsonville (located at 9480 SW Boeckman Rd, Wilsonville, Oregon - only soil/gravel with < 50 ppm PCBs) for interim storage prior to disposal/recycling/destruction. Currently, wastes and used materials not transported directly to the appropriate disposal facility are transferred to the current waste and material handling facilities (PSC and Wilsonville [only soil/gravel with < 50 ppm PCBs]) for interim storage prior to disposal/recycling/destruction.</p> <p>Materials potentially contaminated with PCBs are sealed in barrels and transferred to PGE's waste and material handling facility (currently at PSC). Once received at the waste and material handling facility, these wastes are tested to determine a disposal location appropriate for their PCB concentration or assumed to contain PCBs. These wastes include:</p>	<p>Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf Q21c_HID and Fluorescent Tube Storage Instructions 2006.pdf Q21c_PGE Aerosol Can Disposal Flowchart 2006.pdf Q21c_PGE Battery Flow Chart 2007.pdf Q21c_PGE Bulb & Tube Recycling Flowchart 2006.pdf Q21c_1996-03-01_Cement Demo Waste.pdf</p> <p>Also see Question 15 Attachments Q15_1995-11-02_Wacker Soil Lab Results.pdf Q15_1996-05-15_Wacker Sludge Results.pdf</p> <p>Also see all Question 52 Attachments</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<ul style="list-style-type: none"> • Used/excess lubricants, oils, and other fluids • Obsolete equipment (e.g., transformers, capacitors) • Rags used to clean equipment • Absorbent material used to clean up leaks or spills • Ballasts <p>Wastes not contaminated with PCBs (< 50 ppm) are containerized separately and transferred to PGE's waste and material handling facility (currently at PSC). The Toxic Substances Control Act (TSCA) regulation standard and accepted industry standard is to use "non-PCB" for oils with < 50 ppm PCBs; this term is used throughout this document. These include:</p> <ul style="list-style-type: none"> • Solvents • Batteries • Scrap metal • Light bulbs • General garbage and recycling <p>In 1995, PGE commenced enlarging and upgrading the Wacker Substation, for details of the major modification see the response to Question 13k. As part of the enlargement and upgrading, cement demolition waste was tested for potential PCB contamination prior to disposal. Approximately 20 cubic yards of non-hazardous cement demolition waste (solid) was transported to the Harborton Substation for interim storage prior to disposal at Hillsboro Landfill. See the attached document (Q21c_1996-03-01_Cement Demo Waste.pdf).</p> <p>In conjunction with the Wacker Substation enlargement and upgrading, PGE installed power poles outside of the Wacker Substation easement property by on property owned by Wacker Siltronic. Soil and liquid/sludge were excavated during the power pole installations. The excavated soil and liquid/sludge were tested in 1995/1996; see the documents (Q15_1995-11-02_Wacker Soil Lab Results.pdf and Q15_1996-05-15_Wacker Sludge Results.pdf) attached in response to Question 15. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p> <p>Soil and gravel removed from PGE properties during excavation from equipment spill response or remediation are tested and disposed of appropriately, as needed. The soil and gravel is either transported directly from the site to the disposal facility or is transported to Wilsonville and/or PSC for interim storage before bulk disposal at a location dependant upon PCB content.</p> <p>See the attached documents for descriptions of PGE's waste and used material handling procedures. Also see the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a and the waste disposal permits attached in response to Question 52. The</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>attached mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Wacker Substation.</p> <p>The Harborton Substation, which was historically a PGE waste and material handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Riverview Substation (Supplemental Submittal S7).</p>	
<p>d. the quantity of each such waste or material used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you.</p>	<p>In 1996, approximately 20 cubic yards of non-hazardous cement demolition waste was transported to the Harborton Substation for interim storage prior to disposal at Hillsboro Landfill, Hillsboro OR. See the document (Q21c_1996-03-01_Cement Demo Waste.pdf) attached in response to Question 21c.</p> <p>In conjunction with the Wacker Substation enlargement and upgrading, PGE installed power poles outside of the Wacker Substation easement property but on property owned by Wacker Siltronic. Soil and liquid/sludge were excavated during the power pole installations. The excavated soil and liquid/sludge were tested in 1995/1996; see the document (Q15_1995-11-02_Wacker Soil Lab Results.pdf and Q15_1996-05-15_Wacker Sludge Results.pdf) attached in response to Question 15. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p> <p>Soil and gravel removed from PGE properties during excavation from equipment spill response or remediation are tested and disposed of appropriately, as needed. These are generally transported directly from the site to the disposal facility or to Wilsonville/PSC, depending on concentration of PCB/petroleum hydrocarbon-contamination.</p> <p>For further waste documentation/information, see the response and documents for Questions 21a and 21c. Also see the waste and materials documentation provided in the separate 104(e) response for Harborton Substation, which was historically a waste and material handling facility and is within the Investigation Area, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).</p>	<p>Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf Q21c_HID and Fluorescent Tube Storage Instructions 2006.pdf Q21c_PGE Aerosol Can Disposal Flowchart 2006.pdf Q21c_PGE Battery Flow Chart 2007.pdf Q21c_PGE Bulb & Tube Recycling Flowchart 2006.pdf Q21c_1996-03-01_Cement Demo Waste.pdf</p> <p>Also see Question 15 Attachment Q15_1995-11-02_Wacker Soil Lab Results.pdf Q15_1996-05-15_Wacker Sludge Results.pdf</p>
<p>22. Describe all activities at each Property that was conducted over, on, or adjacent to, the Willamette River. Include in your description whether the activity involved hazardous substances, waste(s), or materials and whether any such hazardous substances, waste(s), or</p>	<p>Not applicable. The Wacker Substation is not located adjacent to the Willamette River.</p>	

104(e) Response
 Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
materials were discharged, spilled, disposed of, dropped, or otherwise came to be located in the Willamette River.		
23. For each Property at which there was or is a mooring facility, dock, wharf or any over-water structure, provide a summary of over-water activities conducted at the structure, including but not limited to, any material loading and unloading operations associated with vessels, materials handling and storage practices, ship berthing and anchoring, ship fueling, and ship building, retrofitting, maintenance, and repair.	Not applicable. The Wacker Substation does not have any over-water structures.	
24. Describe all activities conducted on leased aquatic lands at each Property. Include in your description whether the activity involved hazardous substances, waste, or materials and whether any such hazardous substances, waste, or materials were discharged, spilled, disposed of, dropped, or otherwise came to be located on such leased aquatic lands.	Not applicable. There are no leased aquatic lands at the Wacker Substation.	
25. Please describe the years of use, purpose, quantity, and duration of any application of pesticides or herbicides on each Property during the period of investigation (1937 to the present). Provide the brand name of all pesticides or herbicides used.	<p>Several herbicides have been used at the Wacker Substation to control vegetation growth. From 1992 through 2007, one or more herbicides (i.e., Oust, Diuron, Krovar, Princep, Landmark, Portfolio, and/or Garlon4) were used at the Wacker Substation. To the best of PGE's knowledge, after reasonable inquiry, the following are the quantities applied (when applied):</p> <ul style="list-style-type: none"> • Oust – 2-6 oz per acre • Diuron – 4-6 lbs per acre • Krovar – 10 lbs per acre • Princep – 5 lbs per acre • Landmark – 4.5 oz per acre • Portfolio – 4 oz per acre 	<p>Question 25 Attachment Q25_Wacker Sub Herb App History.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<ul style="list-style-type: none"> • Garlon4 – as needed for spot brush control <p>See the attached document for further details on the known herbicide application history.</p>	
<p>26. Describe how wastes transported off the Property for disposal are and ever were handled, stored, and/or treated prior to transport to the disposal facility.</p>	<p>No waste or materials are stored onsite. Wastes and used materials from within the Investigation Area are either transported directly to the appropriate disposal facility or transported to a PGE waste and material handling facility for interim storage prior to disposal/recycling/destruction. Historically, PGE's waste and material handling facilities were Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, PGE's waste and material handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p> <p>For further waste information, see the response and documents for Question 21.</p>	<p>Also see all Question 21 Attachments</p>
<p>27. Has Respondent ever arranged for disposal or treatment or arranged for transportation for disposal or treatment of materials to any Property (including the Willamette River) within the Investigation Area? If so, please identify every Property that Respondent's materials were disposed or treated at in the Investigation Area. In addition, identify:</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, waste and materials were not disposed of at the Wacker Substation. To the best of PGE's knowledge, after reasonable inquiry, no wastes were disposed of into the Willamette River.</p>	
<p>a. the persons with whom the Respondent made such arrangements;</p>	<p>In general, waste and used material from within the Investigation Area are either transported directly to the appropriate disposal facility or transported to a PGE waste and material handling facility for interim storage prior to disposal/recycling/destruction. Historically, PGE's waste and material handling facilities were Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, PGE's waste and material handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs). The Harborton Substation is within the Investigation Area and is addressed in a separate 104(e) response.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. To the best of PGE's knowledge, after reasonable inquiry, those companies currently used are listed in the document (Q21a_Waste</p>	<p>Question 27 Attachment Q27_Waste-Materials Receivers within IA.pdf</p> <p>Also see all Question 21 Attachments</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>Stream Summary.pdf) attached in response to Question 21a. Of those listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40, those companies within the Investigation Area are summarized in the attached document (Q27_Waste-Materials Receivers within IA.pdf) and include the following:</p> <ul style="list-style-type: none"> • Acme Trading & Supply – located at 4927 NW Front Ave, Portland, OR • AGG Enterprises Inc. – located at 555 N Channel Ave, Portland, OR • Ash Grove Cement Company – located at 13939 N Rivergate Blvd, Portland, OR • Bingham Willamette (now Sulzer Pumps) – located at 2800 NW Front Ave, Portland, OR • Calbag Metals – located at 2495 NW Nicolai St and 12005 N Burgard Way, Portland, OR • Cascade General Inc – located at 5555 N Channel Rd, Portland, OR • General Electric Company – located at 2535 NW 28th Ave, Portland, OR • Northwest Natural Gas Co – located at 123 NW Flanders, Portland, OR • Nudleman & Sons – located at 2707 NW Nela, Portland, OR • Oregon Hydrocarbon/TPS Technologies – located at 9333 N Harborgate St, Portland, OR • Port of Portland – located at 121 NW Everett Street, Portland, OR • Schnitzer Steel – located at 3200 NW Yeon Ave and 12005 N Burgard Way, Portland, OR • Tye Construction Company of Oregon – located at 12005 Burgard Way, Portland, OR • Univar – located at 3950 NW Yeon Ave and 10821 N Lombard St, Portland, OR • Western Steel Cast – located at 3070 SW Moody, Portland, OR <p>To the best of PGE’s knowledge, after reasonable inquiry, none of the companies listed above have been identified as having directly received waste from the Wacker Substation based on the response and documents attached for Question 21.</p> <p>Although there is no indication that the companies/persons listed above have directly received wastes from the Wacker Substation, because these companies have historically received or currently receive waste and/or used materials from the PGE waste and material handling facilities they may have received waste and/or used material from the Wacker Substation. General Electric Company was used as a transformer transfer facility by PGE. It is unknown whether any Wacker Substation equipment went through this facility.</p> <p>The Harborton Substation, a historical PGE waste and materials handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).</p>	
<p>b. every date on which Respondent made such arrangements;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, none of the companies listed in response to Question 27a have been identified as having directly received waste from the Wacker Substation based on the response and documents attached in response to Question 21.</p>	<p>See all Question 21 Attachments</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>Available general PGE contract, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).</p>	
<p>c. the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid) and quantity (volume and weight) of all materials involved in each such arrangement;</p>	<p>Historically, used oil and maintenance waste (including petroleum hydrocarbon and/or PCB contaminated waste) were transported to Harborton Substation, Sellwood Substation, or PSC for interim storage prior to disposal or recycling. Currently, used oil and maintenance waste are transported to PSC for interim storage prior to disposal or recycling. The amount of waste generated during substation operations associated with equipment maintenance varied between substations/properties. To the best of PGE’s knowledge, after reasonable inquiry, PGE does not know the exact quantities/characteristics of oil or routine maintenance waste removed from the substations/properties. The Harborton Substation is within the Investigation Area and is discussed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, disposal/recycling facilities with which PGE has made arrangements for disposal/recycling of wastes for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. The document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal/recycling facility. Of those listed, the following is a description of the waste and used material disposed/recycled at facilities within the Investigation Area:</p> <ul style="list-style-type: none"> • Acme Trading & Supply – Used (but not obsolete) transformers (solid) and ballasts (solid) • AGG Enterprises Inc. – Mixed non-hazardous waste (various) and recyclables • Ash Grove Cement Company – PCB waste: oil (liquid) with PCBs < 50 ppm • Bingham Willamette (now Sulzer Pumps) – Used (but not obsolete) transformers (solid) and oil circuit breakers (solid) • Calbag Metals – Scrap metal (solid) and empty aerosol cans (solid) • Cascade General Inc – Non-hazardous liquid waste/material: mineral oil (liquid) with PCBs < 50 ppm • General Electric Company – Oil with PCBs ≥ 50 ppm (liquid) and obsolete equipment (solid) with trace levels of PCBs ≥ 50 ppm Used (but not obsolete) transformers (solid) • Northwest Natural Gas Co – Transformer oil (liquid) • Nudleman & Sons – Scrap copper (solid) • Oregon Hydrocarbon/TPS Technologies – Solidified contents of USTs (solid) and petroleum hydrocarbon-contaminated soil (solid) • Port of Portland – Used (but not obsolete) transformers (solid) and ballasts (solid) 	<p>See Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p> <p>Also see all Question 21 Attachments</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<ul style="list-style-type: none"> • Schnitzer Steel – Scrap metal (solid) and empty aerosol cans (solid) • Tye Construction Company of Oregon – Transformers (solid) • Univar – Used transformer/insulating oil (liquid, <1 ppm PCBs), used rags/absorbent material from leaks or spills (solid, <5 ppm PCBs), and used transformer/insulating oil (liquid, ≥50 ppm PCBs) • Western Steel Cast – Transformers (solid) <p>To the best of PGE's knowledge, after reasonable inquiry, there are no companies listed above that have directly received waste from the Wacker Substation based on the response and documents attached in response to Question 21. The companies/persons listed above have historically received or currently receive waste and/or used materials from the PGE waste and material handling facilities, which may have included waste and/or used material from the Wacker Substation. The Harborton Substation, a historical PGE waste and material handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).</p>	
d. in general terms, the nature and quantity of the non- hazardous materials involved in each such arrangement;	See the response to Question 27c.	
e. in general terms, the nature and quantity of any hazardous materials involved in each such arrangement;	See the response to Question 27c.	
f. the owner of the materials involved in each such arrangement, if not Respondent;	Not applicable.	
g. all tests, analyses, analytical results or manifests concerning each hazardous material involved in such transactions;	See the response to Question 27c.	
h. the address(es) for each Property, precise locations at which each material involved in such transactions actually was disposed or treated;	See the response to Question 27a.	
i. the owner or operator of each facility at which hazardous or non-hazardous materials were arranged to be disposed at within the Investigation Area;	See the response to Question 27a.	
j. who selected the location to which the materials were to be disposed or	PGE personnel in charge of environmental matters. See the response and documents attached for Question 38, as well as the documents attached in response to Question 6g.	See all Question 38 Attachments Also see all Question 6g Attachments

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
treated;		
k. who selected the Property as the location at which hazardous materials were to be disposed or treated; and	PGE personnel in charge of environmental matters. See the response and documents attached for Question 38, as well as the documents attached in response to Question 6g.	See all Question 38 Attachments Also see all Question 6g Attachments
l. any records of such arrangement and each shipment.	See the response to Question 27c.	
28. Describe the plants and other buildings or structures where Respondent carried out its operations at each Property within the Investigation Area (excluding locations where ONLY clerical/office work was performed).	Wacker Substation Buildings / Structures include: <ul style="list-style-type: none"> • Control building -12 ft x 15 ft prefabricated, steel panel construction, single level building. • Transmission structure – open frame structural steel supporting 115kv bus. • Distribution structure – open frame structural steel supporting 13kv bus. • Capacitor racks – open frame structural steel supporting station capacitors and associated equipment. For further details, see the response to Question 13d.	
29. Provide a schematic diagram or flow chart that fully describes and/or illustrates the Respondent's operations on each Property.	Historical operations on this property include building construction, equipment installation, power distribution (unmanned), equipment maintenance, and equipment decommissioning. Current operations on this property are limited to equipment installation, power distribution (unmanned), equipment maintenance, and equipment decommissioning, as needed. See the attached documents.	Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic-W.pdf
30. Provide a brief description of the nature of Respondent's operations at each location on each Property including:		
a. the date such operations commenced and concluded; and	A perpetual easement for the Wacker Substation property was granted to PGE on October 12, 1978 from Wacker Siltronic. The Wacker Substation has been used for PGE substation operations from 1978 to the present.	
b. the types of work performed at each location, including but not limited to the industrial, chemical, or institutional processes undertaken at each	Equipment maintenance activities: Maintenance of equipment, generation of maintenance waste, disposal of maintenance waste, and removal of obsolete equipment. Construction activities: Excavation, erection of substation structures, welding, painting, wiring, carpentry, installing equipment, and assembly of large equipment. Substation activities (1978-present): Power distribution, operation of equipment, routine maintenance, cleaning, inspection of equipment, minor painting, transfer of oil from supply	See Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic-W.pdf

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>tanks to equipment, transfer of oil between equipment and temporary storage tanks, renewal of lubricants and various consumable fluids, reconfiguration of equipment, upgrade of equipment components, and testing and calibration of equipment.</p> <p>See the documents attached in response to Question 29, as well as the responses to Questions 5g, 13d, and 13k.</p>	
31. If the nature or size of Respondent's operations changed over time, describe those changes and the dates they occurred.	See the responses to Questions 5d, 13d, and 13k.	
32. List the types of raw materials used in Respondent's operations, the products manufactured, recycled, recovered, treated, or otherwise processed in these operations.	Substation activities: No raw materials are/were used in the operation of the substation. No products are/were manufactured, recycled, recovered, treated, or processed during operation.	
33. Provide copies of Material Safety Data Sheets (MSDS) for materials used in the Respondent's operations.	The products/materials currently used at PGE properties within Oregon and potentially used at the Wacker Substation are listed in the attached document (Q33_08 EMC List.pdf). Material Safety Data Sheets (MSDS) for these products/materials are provided in a supplemental submittal (Supplemental Submittal S2). Products/materials used in the past are similar to those used currently.	Question 33 Attachment Q33_08 EMC List.pdf
34. Describe the cleaning and maintenance of the equipment and machinery involved in these operations, including but not limited to:	<p>Substation Maintenance Activities: Routine visual inspections are performed once a month on most of the electrical equipment, including transformers, breakers, switches, regulators, motor operators, meters & relays, and batteries. Lighting systems are visually inspected and operation tests are performed once a month. Inspection of the control systems are performed as needed.</p> <p>Substation Cleaning Activities: Cleaning of electrical equipment varies. Large transformers are cleaned annually, breakers are cleaned based on the number of operations and time since the last inspection, switches are cleaned as needed, insulators are cleaned during scheduled outages, regulators are cleaned or replaced as needed, meters & relays are cleaned during routine calibration, batteries are cleaned approximately twice a year, and the non-electrical surfaces of control systems are cleaned during major construction.</p> <p>Please see the attached cleaning and maintenance activities document (Q34_Maintenance Activities.pdf) for further details, as well as the response and documents for Question 29, and the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a.</p>	<p>Question 34 Attachment Q34_Maintenance Activities.pdf</p> <p>Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf</p> <p>Also see Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic-W.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
a. the types of materials used to clean/maintain this equipment-machinery;	The primary materials that may have been used for equipment maintenance include transformer oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid, and paint.	
b. the monthly or annual quantity of each such material used.	The materials used for equipment maintenance are/were not stored onsite. To the best of PGE's knowledge, after reasonable inquiry, no detailed logs of exact quantities of maintenance materials used or oil/routine maintenance waste removed from the substations/properties are available.	
c. the types of materials spilled in Respondent's operations;	Materials potentially spilled during operations include oil and fluid from equipment spills or leaks. To the best of PGE's knowledge, after reasonable inquiry, there have been no PGE equipment spills/releases at the Wacker Substation.	
d. the materials used to clean up those spills;	The following are PGE general spill response procedures. <ul style="list-style-type: none"> • Minor equipment spills or leaks are cleaned up using sorbent materials. • Major spills are cleaned up using sorbent materials, berms, and necessary equipment. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at this Site. To the best of PGE's knowledge, after reasonable inquiry, there have been no PGE equipment spills/releases at the Wacker Substation.	See all Question 19 Attachments Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf
e. the methods used to clean up those spills; and	Minor equipment spills or leaks are cleaned up as needed by wiping up the oil/fluid with on-hand absorbent materials. Major spills are immediately reported to the System Control Center. PGE's spill response crew is dispatched to clean up the oil. Soiled material is placed into a marked barrel and disposed of properly. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at this Site. To the best of PGE's knowledge, after reasonable inquiry, there have been no PGE equipment spills/releases at the Wacker Substation.	See all Question 19 Attachments Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf
f. where the materials used to clean up those spills were disposed of.	Materials potentially contaminated with PCBs are sealed in barrels and transferred to PGE's waste and material handling facility (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC). If not ascertainable from testing the equipment generating the spill, these wastes are tested to determine a disposal location appropriate for its PCB concentration once they are received at the waste and material handling facility. Materials containing PCBs are disposed at different facilities depending on the concentration of the originally spilled materials, if known, or the concentration in the waste materials. Wastes not contaminated with PCBs are containerized separately and transferred to PGE's waste and	Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>material handling facility (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC).</p> <p>For further details, the response and document (Q21a_Waste Stream Summary.pdf) attached for Question 21.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, there have been no PGE equipment spills/releases at the Wacker Substation.</p>	
<p>35. Describe the methods used to clean up spills of liquid or solid materials during Respondent's operation.</p>	<p>Minor spills or leaks are cleaned up as they occur. The fluid is wiped up with on-hand absorbent materials. Major spills are immediately reported to the PGE System Control Center. PGE's spill response crew is dispatched to clean up the oil. Soiled material is placed into a marked barrel and disposed of properly. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at this Site.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, there have been no PGE equipment spills/releases at the Wacker Substation.</p>	<p>See all Question 19 Attachments</p> <p>Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf</p>
<p>36. For each type of waste (including by-products) from Respondent's operations, including but not limited to all liquids, sludges, and solids, provide the following information:</p> <p>a. its physical state;</p> <p>b. its nature and chemical composition;</p> <p>c. its color;</p> <p>d. its odor.</p> <p>e. the approximate monthly and annual volumes of each type of waste (using such measurements as gallons, cubic yards, pounds, etc.); and</p> <p>f. the dates (beginning & ending) during which each type of waste was produced by Respondent's operations.</p>	<p>PGE operational waste varies month to month and year to year. The following is a summary of the type of wastes that are, or have been, generated from the historical and current operations at the Site:</p> <p>1995/1996 demolition waste:</p> <ul style="list-style-type: none"> • Concrete demolition debris – solid, concrete, grey, no odor, 20 cubic yards, 1995/1996 <p>General PGE materials/wastes potentially contaminated with PCBs include:</p> <ul style="list-style-type: none"> • Used/excess lubricants, oils, and other fluids – liquid, petroleum hydrocarbons, various, petroleum hydrocarbon odor, unknown, 1978-present • Obsolete equipment (e.g., transformers, capacitors) – solid, metal, metallic/petroleum hydrocarbon odor, unknown, 1978-present • Rags used to clean equipment – solid, fabric material, various, alcohol-petroleum hydrocarbon odor, unknown, 1978-present • Ballasts – solid, metallic, electrical lamp component, various, no odor, unknown, 1978-present <p>General materials/wastes not contaminated with PCBs include:</p> <ul style="list-style-type: none"> • Solvents – liquid, oil-based chemical solvents, petroleum hydrocarbon smell, unknown quantity, 1978-present • Batteries – solid, alkaline/zinc-carbon/lithium-based batteries, no odor, unknown quantity, 1978-present • Scrap metal – solid, metallic (e.g., steel), none to metallic odor, unknown quantity, early 	<p>Also see all Question 21 Attachments</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>1978-present</p> <ul style="list-style-type: none"> • Light bulbs – solid, incandescent and fluorescent light bulbs, no odor, unknown quantity, early 1978-present • General garbage – mixed composition, various colors, various odors, unknown quantity, 1978-present • Soils potentially removed during excavation for equipment/building demolition/installation – solid, soil, brown, organic odor, unknown, 1978-present <p>In addition, soil (solid, soil, brown, earthy odor, unknown, 1995) and liquid/sludge (liquid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, unknown, 1996) were excavated by PGE from outside of the Wacker Substation easement property, but on property owned by Wacker Siltronic, during the installation of power poles in 1995/1996. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p> <p>Also see the MSDS documents provided in a supplemental submittal (Supplemental Submittal S2) and the responses and documents for Question 21. Also see the separate 104(e) response for the Harborton Substation (historically at PGE waste and used material handling facility) and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).</p>	
<p>37. Provide a schematic diagram that indicates which part of Respondent's operations generated each type of waste, including but not limited to wastes generated by cleaning and maintenance of equipment and machinery and wastes resulting from spills of liquid materials.</p>	<p>See the response and documents for Question 29, as well as the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a.</p> <p>In addition, soil (solid, soil, brown, earthy odor, unknown, 1995) and liquid/sludge (liquid, petroleum hydrocarbons, black, petroleum hydrocarbon odor, unknown, 1996) were excavated by PGE from outside of the Wacker Substation easement property, but on property owned by Wacker Siltronic, during the installation of power poles in 1995/1996. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p>	<p>See Question 21 Attachment Q21a_Waste Stream Summary.pdf</p> <p>Also see Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic-W.pdf</p>
<p>38. Identify all individuals who currently have and those who have had responsibility for Respondent's environmental matters (e.g. responsibility for the disposal, treatment, storage, recycling, or sale of Respondent's wastes). Also provide each individual's</p>	<p>See the attached document for a listing of those responsible for environmental matters 1980 - present.</p> <p>See the attached 1993 and 1997 Job Descriptions for Environmental Services Manager.</p> <p>See the attached document for management structural information 1982-2008.</p> <p>Also see the documents attached in response to Question 6g.</p>	<p>Question 38 Attachments Q38_Res. For Environmental Matters.pdf Q38_Mgr. Env. Svc. Job description – 1993.pdf Q38_Mgr. Env. Svc. Job description – 1997.pdf Q38_HRIS Structure Info. 1982-2008-4.0.pdf</p> <p>Also see all Question 6g Attachments</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>job title, duties, dates performing those duties, supervisors for those duties, current position or the date of the individual's resignation, and the nature of the information possessed by such individuals concerning Respondent's waste management.</p>		
<p>39. For each type of waste describe Respondent's contracts, agreements or other arrangements for its disposal, treatment, or recycling.</p>	<p>In general terms, waste and used material was historically either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities for interim storage: Haborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, in general terms, waste and used materials are either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities: PSC or Wilsonville (only soil/gravel with < 50 ppm PCBs).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52. Additional available general PGE contract, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Haborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p>	<p>See all Question 21 Attachments</p> <p>Also see all Question 52 Attachments</p>
<p>40. Provide copies of such contracts and other documents reflecting such agreements or arrangements, including but not limited to:</p> <p>a. state where Respondent sent each type of its waste for disposal, treatment, or recycling;</p>	<p>In general terms, waste and used material was historically either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities for interim storage: Haborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, in general terms, waste and used materials are either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities: PSC or Wilsonville (only soil/gravel with < 50 ppm PCBs).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, those companies/persons with whom</p>	<p>Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p> <p>Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf</p> <p>Also see Question 27 Attachment</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>b. identify all entities and individuals who picked up waste from Respondent or who otherwise transported the waste away from Respondent's operations (these companies and individuals shall be called "Waste Carriers" for purposes of this Information Request);</p>	<p>PGE currently has arrangements for disposal/recycling/destruction of wastes and/or used material are listed in the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. The document summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal facility. To the best of PGE's knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the attached document (Q40_Waste-Materials Receivers and Carriers.pdf).</p>	<p>Q27_Waste-Materials Receivers within IA.pdf Also see all Question 52 Attachments</p>
<p>c. if Respondent transported any of its wastes away from its operations, please so indicate;</p>	<p>The following describes the current waste and used material arrangements at PSC, which would have been similar to the historic waste arrangements at Harborton Substation, Sellwood Substation, and PSC (although it is likely that different contractors/service providers were historically utilized):</p>	
<p>d. for each type of waste specify which Waste Carrier picked it up;</p>		
<p>e. indicate the ultimate disposal/recycling/treatment location for each type of waste.</p>	<ul style="list-style-type: none"> • Earth Protection Services, Inc. (EPSI) recycles the variety of recyclable waste and used materials from the PSC (i.e., ballasts, batteries, and mercury containing articles). New empty containers are exchanged for the filled containers. If there are any concerns about the integrity of the new containers or any other concerns, PGE's Environmental Services (which processes all EPSI invoices) is called to ensure that the vendor promptly corrects the problem. EPSI is a nationally recognized recycling vendor. 	
<p>f. provide all documents indicating the ultimate disposal/recycling/treatment location for each type of waste; and</p>	<ul style="list-style-type: none"> • Used transformer/insulating oil (< 1 ppm PCBs) is recycled in house by PGE or by Univar USA Inc.. Univar also picks up and transports used transformer/insulating oil (≥ 50 ppm PCBs) to either Clean Harbors Deer Park or to Clean Harbors Aragonite. In addition, Univar picks up and transports used rags and absorbent material (≥ 50 ppm PCBs) to Arlington Landfill. 	
<p>g. state the basis for and provide any documents supporting the answer to the previous question.</p>	<ul style="list-style-type: none"> • Used rags and absorbent material (1 to 50 ppm PCBs) is picked up by NRC Environmental Services and transported to Columbia Ridge Landfill. • Used transformer/insulating oil (1 to 50 ppm PCBs) is picked up by Transformer Technologies and is incinerated by Transformer Technologies or recycled at Environmental Management of Kansas City. • Non-PCB containing used oil (e.g., hydraulic fluids, compressor oil, and motor oil), used oil filters, and used antifreeze from the maintenance shop are collected in labeled 55-gallon drums and recycled or used for energy recovery by Thermo Fluids. • All parts washers are maintained under license by Safety Kleen which performs monthly service calls. Safety Kleen recycles all used non-hazardous solvents and brake solution, processing the solvent and brake solution for reuse. • Aerosol can drainings are collected in industry standard aerosol can puncturing 	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>devices. At PSC, punctured cans are recycled by CalBag Metals Recycling (non-ferrous metal) or Schnitzer Steel (ferrous metal). When the drums are near full, they are sampled by a licensed laboratory to help characterize the waste prior to collection. Other non-PCB-contaminated scrap metal is also recycled by CalBag Metals Recycling (non-ferrous metal) or Schnitzer Steel (ferrous metal).</p> <ul style="list-style-type: none"> • Hazardous solvents and paint drainings from aerosol cans are picked up by Veolia Environmental Services and incinerated at Veolia Es Technical Solutions. • Non-PCB-contaminated used equipment parts (e.g., gaskets, hoses, and air filters), auto parts (brake pads, belts, and air filters), and general trash are picked up by waste management and transported to various waste management landfills. • Oil-filled obsolete transformers and other electrical equipment (< 50 ppm PCBs) are transported to Transformer Technologies. Oil-filled obsolete transformers and other electrical equipment (≥ 50 ppm PCBs) are sent to either Clean Harbors Deer Park or Clean Harbors Argonite for incineration. Oil-filled ballasts (> 1 ppm PCBs) are sent to Arlington Landfill or Clean Harbors Deer Park. • Drained obsolete equipment (< 50 ppm PCBs) is recycled by Coleman Metals and drained obsolete equipment (50 to 500 ppm PCBs) is disposed of at Arlington Landfill. <p>Soil and gravel removed from PGE properties during excavation from equipment spill response or remediation are tested and disposed of appropriately, as needed. The soil and gravel is either transported directly from the site to the disposal facility or are transported to Wilsonville (only soil/gravel with < 50 ppm PCBs) and/or PSC for interim storage before bulk disposal at a location dependant upon PCB-content.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52. Also see the response and document attached in response to Question 27. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response (historically a PGE waste and material handling facility within the Investigation Area), the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).</p>	
<p>41. Describe all wastes disposed by Respondent into Respondent's drains</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, other than the stormwater drainage and oil water separator associated with the stormwater control and secondary spill containment</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>including but not limited to:</p> <ul style="list-style-type: none"> a. the nature and chemical composition of each type of waste; b. the dates on which those wastes were disposed; c. the approximate quantity of those wastes disposed by month and year; d. the location to which these wastes drained (e.g. septic system or storage tank at the Property, pre-treatment plant, Publicly Owned Treatment Works (POTW), etc.); and e. whether and what pretreatment was provided. 	<p>system, no drains other are/were present at the Wacker Substation. To the best of PGE's knowledge, after reasonable inquiry, no wastes are/were disposed of into the stormwater drainage at the Wacker Substation. There are/were no waste treatment/pretreatment facilities at the Wacker Substation other than the oil water separator associated with the stormwater control and secondary spill containment system. For further details on site stormwater, see the response to Questions 13i, 18, and 19.</p>	
<p>42. Identify any sewage authority or treatment works to which Respondent's waste was sent.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, there were no sewage authority or treatment works to which the Wacker Substation waste was sent.</p>	
<p>43. Describe all settling tank, septic system, or pretreatment system sludges or other treatment wastes resulting from Respondent's operations.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, there were no settling tanks, septic systems, or pretreatment system sludges or other treatment wastes resulting from operations at the Wacker Substation.</p>	
<p>44. If applicable, describe the facilities, processes and methods Respondent or Respondent's contractor used, and activities engaged in, either currently or in the past, related to ship building, retrofitting, maintenance or repair, including, but not limited to, dry-docking operations, tank cleaning, painting and re-powering.</p>	<p>Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at the Wacker Substation.</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
45. Describe any hazardous substances, wastes, or materials used or generated by the activities described in response to the previous Question and how these hazardous substances, materials and wastes were released or disposed of.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at the Wacker Substation.	
46. Provide copies of any records you have in your possession, custody or control relative to the activities described in response to the previous two Questions.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at the Wacker Substation.	
47. Describe any process or activity conducted on a Property identified in response to Question 4 involving the acquisition, manufacture, use, storage, handling, disposal or release or threatened release of polychlorinated biphenyl(s) ("PCB(s)" or PCB(s)-containing materials or liquids.	<p>In general, PGE replaces PCB-containing or potentially PCB-containing oil-filled equipment (e.g., transformers, capacitors, circuit breakers, bushings, and step regulators) with non-PCB containing equipment (< 50 ppm PCBs) as they are removed from service. The primary materials that may have been used for equipment maintenance at PGE substations include dielectric fluids (oil) and transformer oil, which may have historically contained PCBs. To the best of PGE's knowledge, after reasonable inquiry, other than minor repairs or work on large equipment, electrical equipment maintenance was generally not performed onsite. Instead, equipment was taken out of service and transported to PGE's waste and material handling facility for repairs and retrofitting.</p> <p>See the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Wacker Substation. The document identifies the position of the oil filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. The majority of the oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the document (Q21a_1986_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of PCB-containing oil-filled substation equipment at the Wacker Substation in 1986. This document indicates that the WR1 transformer, sampled in October 1980, had a total PCB concentration of 22 ppm. As shown in the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, the current WR1 transformer was installed in 1996 and has an assumed total PCB concentration of less than 1.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, there have been no PGE equipment spills/releases at the Wacker Substation.</p> <p>Also see the documents attached in response to Questions 29 and waste stream summary document attached in response to Question 21a.</p>	<p>See Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21a_2008_Oil Filled Equipment.pdf Q21a_1986_Oil Filled Equipment.pdf</p> <p>Also see Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic-W.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	Also see the annual PCB reports (1978-2007) for PGE (all PGE sites combined), which are provided in a supplemental submittal (Supplemental Submittal S3). The 2008 annual PCB report is not included in the supplemental submittal because it has not yet been completed.	
48. For each process or activity identified in response to the previous Question, describe the dates and duration of the activity or process and the quantity and type of PCB(s) or PCB(s) containing materials or liquids.		
a. the manufacturer and serial number of each transformer;	Since 1978/1979, various substation equipment has been installed at the Wacker Substation. See the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled substation equipment currently at the Wacker Substation. The documents identify the position of the oil filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. The majority of the pieces of oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978.	See Question 21 Attachments Q21a_2008_Oil filled Equipment.pdf Q21a_1986_Oil Filled Equipment.pdf
b. the quantity of oil in each transformer;		
c. the concentrations of PCB contained in the transformer oil;		
d. the time period or periods in which these transformers were sent to the Property;	Also see the attached document (Q21a_1986_Oil Filled Equipment.pdf) for the list of oil-filled substation equipment at the Wacker Substation in 1986. This document indicates that the WR1 transformer, sampled in October 1980, had a total PCB concentration of 22 ppm. As shown in the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, the current WR1 transformer was installed in 1996 and has an assumed total PCB concentration of less than 1.	
e. details about how each transformer was handled or stored or otherwise processed;	Equipment is handled by trained, qualified personnel. Equipment is energized and in service. Obsolete equipment is drained prior to disposal/recycling, if possible. Drained oil is incinerated or recycled, depending on PCB content. Obsolete equipment may be transferred to a PGE waste and used materials handling facility for interim storage prior to disposal/recycling. The obsolete equipment is incinerated, landfill disposed, or recycled based on PCB content and structural composition. See the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. Some used, but not obsolete, transformers have been sold to other companies/persons. These are documented in Supplemental Submittal S7 (documentation from facilities that may have received waste and materials from properties within the Investigation Area). For further information, see the response to Questions 21, 27, and 40. Also see the separate 104(e) response for the Harborton Substation, which was also historically a PGE waste and material handling facility and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation	See Question 21 Attachment Q21a_Waste Stream Summary.pdf

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>f. information describing the contractual relationship Respondent had, if any, with owners or users of the respective transformers, including but not limited to, liability for disposal;</p>	<p>(Supplemental Submittal S7).</p> <p>Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE owns the electrical equipment within the boundaries of the substation fence and Wacker Siltronic owns them outside of the substation fence.</p>	
<p>g. information on any other oil filled electrical equipment at the Property, and;</p>	<p>See the document attached in response to Question 21a (Q21a_2008_Oil Filled Equipment.pdf), which lists the current oil filled equipment at the Wacker Substation. Also see the document (Q21a_1986_Oil Filled Equipment.pdf) attached in response to Question 21a, which lists the oil filled substation equipment at the Wacker Substation in 1986. This document indicates that the WR1 transformer, sampled in October 1980, had a total PCB concentration of 22 ppm. As shown in the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, the current WR1 transformer was installed in 1996 and has an assumed total PCB concentration of less than 1.</p>	<p>See Question 21 Attachments Q21a_2008_Oil Filled Equipment.pdf Q21a_1986_Oil Filled Equipment.pdf</p>
<p>h. complete copies of any contracts, invoices, receipts, or other documents related to the transformers or other oil filled electrical equipment to the Property.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52.</p> <p>Additional available general PGE contract, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).</p>	<p>See all Question 21 Attachments</p> <p>Also see all Question 52 Attachments</p>
<p>49. For each process or activity identified in response to the previous two Questions, identify the location of the process or activity on the Property.</p>	<p>See the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, which lists the current oil filled equipment at the Wacker Substation, including the position of the equipment. Also see the document (Q21a_1986_Oil Filled Equipment.pdf) attached in response to Question 21a, which lists the oil filled substation equipment at the Wacker Substation in 1986, including the position of the equipment. This document indicates that the WR1 transformer, sampled in October 1980, had a total PCB concentration of 22 ppm. As shown in the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, the current WR1 transformer was installed in 1996 and has an assumed total PCB concentration of less than 1.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE is not aware of any other processes or activities on the property, either currently or historically.</p> <p>Also see the documents attached in response to Question 19, which include figures that show the location of oil filled equipment.</p>	<p>See Question 21 Attachments Q21a_2008_Oil Filled Equipment.pdf Q21a_1986_Oil Filled Equipment.pdf</p> <p>Also see all Question 19 Attachments</p>
<p>Section 5.0 - Regulatory Information</p>		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>50. Identify all federal, state and local authorities that regulated the owner or operator of each Property and/or that interacted with the owner or operator of each Property. Your response is to address all interactions and in particular all contacts from agencies/departments that dealt with health and safety issues and/or environmental concerns.</p>	<p>The primary federal, state and local agencies that have regulated PGE at this Site include:</p> <ul style="list-style-type: none"> • City of Portland (including fire, medical, and police): building safety inspections and facility enhancements • Oregon Department of Environmental Quality (DEQ): product/waste disposal and facility enhancements • U.S. Environmental Protection Agency (USEPA): for Portland Harbor Superfund Site, Resource Conservation and Recovery Act (RCRA), and Toxic Substances Control Act (TSCA) <p>Regarding health and safety concerns, interaction with the following agencies would occur as a result of a compliance inspection, a consultation visit or during the course of an accident investigation (contact with the OPUC would occur if an accident of a certain severity occurred at a site):</p> <ul style="list-style-type: none"> • Federal Occupational Safety and Health Administration (OSHA) • Oregon Occupational Safety and Health Administration (OrOSHA) • Oregon Public Utility Commission (OPUC) • Oregon Department of Transportation (ODOT) • Oregon Department of Energy (ODOE) • Federal Energy Regulatory Commission (FERC) <p>To the best of PGE's knowledge, after reasonable inquiry, there has been neither correspondence to PGE specific to the Wacker Substation nor have there been inspections of the Wacker Substation by these agencies.</p>	
<p>51. Describe all occurrences associated with violations, citations, deficiencies, and/or accidents concerning each Property during the period being investigated related to health and safety issues and/or environmental concerns. Provide copies of all documents associated with each occurrence described.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE has not had any environmental related violations/citations/deficiencies at the Wacker Substation.</p> <p>PGE maintains records of all OSHA accidents and injuries; however, the records are not categorized or searchable by property. To best of PGE's knowledge, after reasonable inquiry, PGE does not know if any OSHA reportable accidents/injuries have occurred at the Wacker Substation.</p>	
<p>52. Provide a list of all local, state and federal environmental permits ever issued to the owner or operator on each Property (e.g., RCRA permits, NPDES permits, etc.). Please provide a copy of each federal and state permit, and the</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the Wacker Substation does not have any environmental or non-environmental permits.</p> <p>The attached documents (Q52_01.pdf and Q52_02.pdf) are general PGE disposal permits, for which specific contributions from substations are not indicated. A component of the waste disposed under these permits may have originated from the Wacker Substation.</p>	<p>Question 52 Attachments Q52_01.pdf Q52_02.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
applications for each permit, ever issued to the owner or operator on each Property.		
53. Did the owner or operator ever file a Hazardous Waste Activity Notification under the RCRA? If so, provide a copy of such notification.	<p>To the best of PGE's knowledge, after reasonable inquiry, no Hazardous Waste Activity Notification was filed for the Wacker Substation.</p> <p>Hazardous materials from the Wacker Substation, if any, has been disposed of after interim storage at a PGE waste and material handling facility (e.g., the PSC). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and material handling facility, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).</p>	
54. Did the owner or operator's facility on each Property ever have "interim status" under the RCRA? If so, and the facility does not currently have interim status; describe the circumstances under which the facility lost interim status.	Not applicable. No application for "interim status."	
55. Provide all RCRA Identification Numbers issued to Respondent by EPA or a state for Respondent's operations.	To the best of PGE's knowledge, after reasonable inquiry, no RCRA Identification Number has been issued for the Wacker Substation.	
56. Identify all federal offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.	To the best of PGE's knowledge, after reasonable inquiry, no hazardous substance or hazardous waste information from the Wacker Substation has been sent or filed to any federal offices.	
57. Identify all state offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which	<p>To the best of PGE's knowledge, after reasonable inquiry, no hazardous substance or hazardous waste information from the Wacker Substation has been sent or filed to any state offices.</p> <p>Hazardous materials from the Wacker Substation, if any, have been disposed of after interim</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
such information was sent/filed.	storage at a PGE waste and material handling facility (e.g., the PSC). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and material handling facility, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Wacker Substation (Supplemental Submittal S7).	
58. List all federal and state environmental laws and regulations under which the Respondent has reported to federal or state governments, including but not limited to: Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq., (TSCA); Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Sections 1101 et seq., (EPCRA); and the Clean Water Act (the Water Pollution Prevention and Control Act), 33 U.S.C. Sections 1251 et seq., Oregon Hazardous Substance Remedial Action Law, ORS 465.315, Oregon Water Quality law, ORS Chapter 468(b), Oregon Hazardous Waste and Hazardous Materials law, ORS Chapters 465 and 466, or Oregon Solid Waste law, ORS Chapter 459. Provide copies of each report made, or if only oral reporting was required, identify the federal and state offices to which such report was made.	The federal and state environmental laws and regulations under which PGE has reported to federal and state governments for the Wacker Substation include the Oregon Solid Waste Law and the state fire code.	
59. Provide a copy of any registrations, notifications, inspections or reports required by the Toxic Substances Control Act, 15 USC § 2601 et seq., or state law, to be maintained or submitted to any government agency, including fire marshal(s), relating to PCB(s) or PCB(s) containing materials or liquids on any	Annual PCB reports (1978-2007) for PGE (all PGE sites combined) are maintained in compliance with record-reporting rule 40 CFR 761 and are provided in a supplemental submittal (Supplemental Submittal S3). The 2008 annual PCB report is not included in the supplemental submittal because it has not yet been completed.	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
Property identified in response to Question 4.		
60. Has Respondent or Respondent's contractors, lessees, tenants, or agents ever contacted, provided notice to, or made a report to the Oregon Department of State Lands ("DSL") or any other state agency concerning an incident, accident, spill, release, or other event involving Respondent's leased state aquatic lands? If so, describe each incident, accident, spill, release, or other event and provide copies of all communications between Respondent or its agents and DSL or the other state agency and all documents that were exchanged between Respondent, its agents and DSL or other state agency.	To the best of PGE's knowledge, after reasonable inquiry, no. The Wacker Substation is not adjacent to the Willamette River.	
61. Describe all notice or reporting requirements to DSL that you had under an aquatic lands lease or state law or regulation regarding incidents affecting, or activities or operations occurring on leased aquatic lands. Include the nature of the matter required to be reported and the office or official to whom the notice or report went to. Provide copies of all such notices or reports.	To the best of PGE's knowledge, after reasonable inquiry, none. The Wacker Substation is not adjacent to the Willamette River.	
Section 6.0 - Releases and Remediation		
62. Identify all leaks, spills, or releases into the environment of any waste, including petroleum, hazardous substances, pollutants, or contaminants,	To the best of PGE's knowledge, after reasonable inquiry, there have been no leaks, spills, or releases into the environment of any waste, hazardous substances, pollutants, or contaminants at the Wacker Substation by PGE. The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183).	

104(e) Response
 Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>that have occurred at or from each Property, which includes any aquatic lands owned or leased by Respondent. In addition, identify and provide copies of any documents regarding:</p> <p>a. when such releases occurred;</p> <p>b. how the releases occurred (e.g. when the substances were being stored, delivered by a vendor, transported or transferred (to or from any tanks, drums, barrels, or recovery units), and treated);</p> <p>c. the amount of each hazardous substances, pollutants, or contaminants so released;</p> <p>d. where such releases occurred;</p> <p>e. any and all activities undertaken in response to each such release or threatened release, including the notification of any agencies or governmental units about the release;</p> <p>f. any and all investigations of the circumstances, nature, extent or location of each release or threatened release including, the results of any soil, water (ground and surface), or air testing undertaken;</p> <p>g. all persons with information relating to these releases; and</p> <p>h. list all local, state, or federal departments or agencies notified of the release, if applicable;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any and all investigations and remedial actions associated with the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>63. Was there ever a spill, leak, release or discharge of waste, including petroleum, or hazardous substances, pollutant or contaminant into any subsurface disposal system or floor drain inside or under a building on the Property? If the answer to the preceding question is anything but an unqualified "no", identify:</p> <p>a. where the disposal system or floor drains were located;</p> <p>b. when the disposal system or floor drains were installed;</p> <p>c. whether the disposal system or floor drains were connected to pipes;</p> <p>d. where such pipes were located and emptied;</p> <p>e. when such pipes were installed;</p> <p>f. how and when such pipes were replaced, or repaired; and</p> <p>g. whether such pipes ever leaked or in any way released such waste or hazardous substances into the environment.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, there has been no disposal of or any spills, leaks, releases, or discharges of waste into a subsurface disposal system or floor drains at the Wacker Substation.</p>	
<p>64. Has any contaminated soil ever been excavated or removed from the Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify and provide copies of any documents regarding:</p> <p>a. amount of soil excavated;</p> <p>b. location of excavation presented on a map or aerial photograph;</p> <p>c. manner and place of disposal and/or storage of excavated soil;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, no contaminated soil has ever been excavated or removed from the Wacker Substation by PGE.</p> <p>In conjunction with the Wacker Substation enlargement and upgrading, PGE installed power poles outside of the Wacker Substation easement property but on property owned by Wacker Siltronic. Soil was excavated during the power pole installations. The excavated soil was tested in 1995; see the document (Q15_1995-11-02_Wacker Soil Lab Results.pdf) attached in response to Question 15.</p> <p>The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE’s knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if</p>	<p>See Question 15 Attachment Q15_1995-11-02_Wacker Soil Lab Results.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>d. dates of soil excavation;</p> <p>e. identity of persons who excavated or removed the soil, if other than a contractor for Respondent;</p> <p>f. reason for soil excavation;</p> <p>g. whether the excavation or removed soil contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the soil contained, and why the soil contained such constituents;</p> <p>h. all analyses or tests and results of analyses of the soil that was removed from the Property;</p> <p>i. all analyses or tests and results of analyses of the excavated area after the soil was removed from the Property; and</p> <p>j. all persons, including contractors, with information about (a) through (i) of this request.</p>	<p>any).</p>	
<p>65. Have you ever tested the groundwater under your Property? If so, please provide copies of all data, analysis, and reports generated from such testing.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, no groundwater under the Wacker Substation has ever been tested by PGE.</p> <p>The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE’s knowledge, after reasonable inquiry, PGE is unaware of whether or not groundwater under the Wacker Substation has been tested by Wacker Siltronic.</p>	
<p>66. Have you treated, pumped, or taken any kind of response action on groundwater under your Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify:</p> <p>a. reason for groundwater action;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, no response action of any kind has been taken on groundwater under the Wacker Substation by PGE.</p> <p>The Wacker Siltronic property, including the Wacker Substation, is a cleanup site (ECSI # 183). To the best of PGE’s knowledge, after reasonable inquiry, PGE is unaware of whether or not Wacker Siltronic has treated, pumped, or taken any kind of response action on groundwater under the Wacker Substation.</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>b. whether the groundwater contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the groundwater contained, and why the groundwater contained such constituents;</p> <p>c. all analyses or tests and results of analyses of the groundwater;</p> <p>d. if the groundwater action has been completed, describe the basis for ending the groundwater action; and</p> <p>e. all persons, including contractors, with information about (a) through (c) of this request.</p>		
<p>67. Was there ever a spill, leak, release or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river? If the answer to the preceding question is anything but an unqualified "no", identify:</p> <p>a. the nature of the hazardous substance, waste, or material spilled, leaked, released or discharged;</p> <p>b. the dates of each such occurrence;</p> <p>c. the amount and location of such release;</p> <p>d. were sheens on the river created by the release;</p> <p>e. was there ever a need to remove or dredge any solid waste, bulk product, or other material from the river as a result of the release? If so, please provide information and description of when such</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, no. The site is not on, over, or adjacent to the Willamette River.</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
removal/dredging occurred, why, and where the removed/dredged materials were disposed.		
68. For any releases or threatened releases of PCB(s), identify the date, quantity, location and type of PCB(s) or PCB(s) containing materials or liquids, and the nature of any response to or cleanup of the release.	<p>In general, PGE replaces PCB-containing or potentially PCB-containing oil-filled equipment (e.g., transformers, capacitors, circuit breakers, bushings, and step regulators) with non-PCB containing equipment (< 50 ppm PCBs) as they are removed from service. The primary materials that may have been used for equipment maintenance at PGE substations include dielectric fluids (oil) and transformer oil, which may have historically contained PCBs. To the best of PGE's knowledge, after reasonable inquiry, other than minor repairs, electrical equipment maintenance was generally not performed onsite. Instead, equipment was taken out of service and transported to PGE's waste and material handling facility for repairs and retrofitting.</p> <p>See the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Wacker Substation. The document identifies the position of the oil filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs and the total volume of oil. The majority of the oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the document (Q21a_1986_Oil Filled Equipment.pdf) attached in response to Question 21a for the list of PCB-containing oil-filled substation equipment at the Wacker Substation in 1986. This document indicates that the WR1 transformer, sampled in October 1980, had a total PCB concentration of 22 ppm. As shown in the document (Q21a_2008_Oil Filled Equipment.pdf) attached in response to Question 21a, the current WR1 transformer was installed in 1996 and has an assumed total PCB concentration of less than 1.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, there have been no releases or threatened releases of PCBs into the environment at the Wacker Substation by PGE.</p> <p>Also see the annual PCB reports (1978-2007) for PGE (all PGE sites combined), which are provided in a supplemental submittal (Supplemental Submittal S3). The 2008 annual PCB report is not included in the supplemental submittal because it has not yet been completed.</p>	See Question 21 Attachments Q21a_2008_Oil Filled Equipment.pdf Q21a_1986_Oil Filled Equipment.pdf
69. For any releases or threatened releases of PCB(s) and/or PCB(s) containing materials or liquids, identify and provide copies of any documents regarding the quantity and type of waste generated as a result of the release or	To the best of PGE's knowledge, after reasonable inquiry, there have been no releases or threatened releases of PCBs into the environment at the Wacker Substation by PGE.	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>threatened release, the disposition of the waste, provide any reports or records relating to the release or threatened release, the response or cleanup and any records relating to any enforcement proceeding relating to the release or threatened release. Provide all documentation regarding, but not limited to, the following releases:</p>		
<p>a. a May 20, 1988 release of 20 gallons of 400 parts per million PCB transformer oil;</p>	<p>Not applicable. Questions 69a through 69e are not relevant to the Wacker Substation. Information regarding these releases is provided in the 104(e) response for the Harborton Substation.</p>	
<p>b. a February 9, 1995 release of 5 gallons of oil that spilled from a bushing on the ground;</p>		
<p>c. a February 24, 1997 release of 20 gallons of 19 parts per million PCB transformer oil onto the ground, and;</p>		
<p>d. a July 25, 1997 release of 3 gallons of less than 5 parts per million PCB oil from a break on the ground, and;</p>		
<p>e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.</p>		
<p>Section 7.0 - Property Investigations</p>		
<p>70. Provide information and documentation concerning all inspections, evaluations, safety audits, correspondence and any other documents associated with the conditions, practices, and/or procedures at the Property concerning insurance issues or insurance coverage matters.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, no insurance or coverage-related health and safety inspections, evaluations, audits or correspondence were prepared for this location.</p> <p>The attached document (Q70_FM Global Substation Review.pdf) relates to general fire, flood, wind, and earthquake inspections. An engineer from PGE’s office of Facilities Management (FM) conducts several inspections a year at most of our locations. The engineer will do a complete walk through each facility looking for fire hazards and will issue a recommendation when a problem is found. Along with these inspections, the fire protection systems and equipment are checked and usually functionally tested. There are locations that are inspected by FM which do not require the issuing of an inspection report. These locations are small substations where</p>	<p>Question 70 Attachment Q70_FM Global Substation Review.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<p>there are only pressure vessels located on the system circuit breakers. This inspection is required by the State of Oregon. Following the inspection, the inspector will send his report to the State so they can keep up to date on the condition of our pressure vessels.</p> <p>Copies of PGE's relevant general liability insurance policies are provided in a supplemental submittal (Supplemental Submittal S4).</p>	
<p>71. Describe the purpose for, the date of initiation and completion, and the results of any investigations of soil, water (ground or surface), sediment, geology, and hydrology or air quality on or about each Property, Provide copies of all data, reports, and other documents that were generated by you or a consultant, or a federal or state regulatory agency related to the investigations that are described.</p>	<p>The SPCC plan (Q19_2000 Wacker SPCC.pdf), attached in response to Question 19, briefly discusses topography and soil condition at the Wacker Substation.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, there are no other reports, information, or data related to soil, water, air quality, or geology/hydrogeology at the Wacker Substation easement property.</p> <p>In conjunction with the Wacker Substation enlargement and upgrading conducted between 1995 and 1998, PGE installed power poles outside of the Wacker Substation easement property but on property owned by Wacker Siltronic. Subsurface material (soil and liquid/sludge) was excavated during the power pole installations. A composite of excavated soil was tested for PCBs and found to be non-detect, see the document (Q15_1995-11-02_Wacker Soil Lab Results.pdf) attached in response to Question 15. The liquid/sludge was tested for total petroleum hydrocarbons, volatile organic compounds, and metals; see the document (Q15_1996-05-15_Wacker Sludge Results.pdf) attached in response to Question 15. The Wacker Siltronic property, including the Wacker Substation, is a DEQ cleanup site (ECSI # 183). To the best of PGE's knowledge, after reasonable inquiry, Wacker Siltronic was and is responsible for any excavated materials from the Wacker Siltronic property, including the Wacker Substation (except for materials and wastes from PGE equipment spills/releases, if any).</p>	<p>See Question 15 Attachments Q15_1995-11-02_Wacker Soil Lab Results.pdf Q15_1996-05-15_Wacker Sludge Results.pdf</p> <p>Also see Question 19 Attachment Q19_2000 Wacker SPCC.pdf</p>
<p>a. a May 20, 1988 release of 20 gallons of 400 parts per million PCB transformer oil;</p>	<p>Not applicable. Questions 71a through 71e are not relevant to the Wacker Substation. Information regarding these investigations is provided in the response for the Harborton Substation.</p>	
<p>b. a February 9, 1995 release of 5 gallons of oil that spilled from a bushing on the ground;</p>		
<p>c. a February 24, 1997 release of 20 gallons of 19 parts per million PCB transformer oil onto the ground, and;</p>		
<p>d. a July 25, 1997 release of 3 gallons of less than 5 parts per million PCB oil from a break on the ground, and;</p>		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.</p>		
<p>72. Describe any remediation or response actions you or your agents or consultants have ever taken on each Property either voluntarily or as required by any state or federal agency. If not otherwise already provided under this Information Request, provide copies of all investigations, risk assessments or risk evaluations, feasibility studies, alternatives analysis, implementation plans, decision documents, monitoring plans, maintenance plans, completion reports, or other document concerning remediation or response actions taken on each Property.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, no remedial or response actions have taken place at the Wacker Substation.</p> <p>An asbestos survey was conducted at the Wacker Substation in 2006, but the survey did not find that the building material to contained asbestos and, therefore, no remedial/response actions were necessary. See the attached health and safety asbestos survey (Q72_1997 Asb Sur Wacker Sub.pdf).</p>	<p>Question 72 Attachment Q72_1997 Asb Sur Wacker Sub.pdf</p>
<p>73. Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, and hydrology or air quality on or about the Property? If so, identify:</p> <p>a. what the nature and scope of these investigations will be;</p> <p>b. the contractors or other persons that will undertake these investigations;</p> <p>c. the purpose of the investigations;</p> <p>d. the dates when such investigations will take place and be completed; and</p> <p>e. where on the Property such investigations will take place.</p>	<p>No future investigations for this site are planned. Soil confirmation sampling may be conducted in the future, after cleanup of small spill events and general operational activities (e.g., removal, updates, maintenance) on an as needed basis.</p>	
<p>Section 8.0 - Corporate Information</p>		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>74. Provide the following information, when applicable, about you and/or your business(es) that are associated with each Property identified in response to Question 4:</p> <p>a. state the current legal ownership structure (e.g., corporation, sole proprietorship);</p> <p>b. state the names and current addresses of all current and past owners of the business entity or, if a corporation, current and past officers and directors;</p> <p>c. discuss all changes in the business' legal ownership structure, including any corporate successorship, since the inception of the business entity. For example, a business that starts as a sole proprietorship, but then incorporates after a few years, or a business that is subsequently acquired by and merged into a successor. Please include the dates and the names of all parties involved;</p> <p>d. the names and addresses of all current or past business entities or subsidiaries in which you or your business has or had an interest that have had any operational or ownership connection with the Properties identified in response to Question 4. Briefly describe the business activities of each such identified business entities or subsidiaries; and</p>	<p>Responses and documents for Section 8.0 – Corporate Information for all PGE sites are provided in a supplemental submittal (Supplemental Submittal S1).</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>e. if your- business formerly owned or operated a Property identified in response to Question 4, describe any arrangements made with successor owners or operators regarding liability for environmental contamination or property damage.</p>		
<p>75. List all names under which your company or business has ever operated and has ever been incorporated. For each name, provide the following information:</p>		
<p>a. whether the company or business continues to exist, indicating the date and means by which it ceased operations (e.g., dissolution, bankruptcy, sale) if it is no longer in business;</p>		
<p>b. names, addresses, and telephone numbers of all registered agents, officers and operations management personnel; and</p>		
<p>c. names, addresses, and telephone numbers of all subsidiaries, unincorporated divisions or operating units, affiliates, and parent corporations if any, of the Respondent.</p>		
<p>d. all information requested in (a) through (c) above regarding, but not limited to, the following entities and including their relationship to Respondent (e.g. whether these entities are business partners, separate entities, subsidiaries, and/or aliases etc. of Respondent):</p>		
<p>i. V & K Service, Inc.; and</p>		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>ii. Jinkz Corp.</p>		
<p>76. Provide all copies of the Respondent's authority to do business in Oregon. Include all authorizations, withdrawals, suspensions and reinstatements.</p>		
<p>77. If Respondent is, or was at any time, a subsidiary of, otherwise owned or controlled by, or otherwise affiliated with another corporation or entity, then describe the full nature of each such corporate relationship, including but not limited to:</p>		
<p>a. a general statement of the nature of relationship, indicating whether or not the affiliated entity had, or exercised, any degree of control over the daily operations or decision-making of the Respondent's business operations at the Site;</p>		
<p>b. the dates such relationship existed;</p>		
<p>c. the percentage of ownership of Respondent that is held by such other entity(ies);</p>		
<p>d. for each such affiliated entity provide the names and complete addresses of its parent, subsidiary, and otherwise affiliated entities, as well as the names and addresses of each such affiliated entity's officers, directors, partners, trustees, beneficiaries, and/or shareholders owning more than five percent of that affiliated entity's stock;</p>		

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>e. provide any and all insurance policies for such affiliated entity(ies) which may possibly cover the liabilities of the Respondent at each Property; and</p> <p>f. provide any and all corporate financial information of such affiliated entities, including but not limited to total revenue or total sales, net income, depreciation, total assets and total current assets, total liabilities and total current liabilities, net working capital (or net current assets), and net worth.</p> <p>g. all information requested in (a) through (f) above regarding, if applicable, but also explain any corporate or financial relationship Respondent may have had or has with the Enron Corporation.</p>		
<p>78. If Respondent is a partnership, please describe the partnership and provide a history of the partnership's existence. Provide a list of all current and past partners of any status (e.g., general, limited, etc.) and provide copies of all documents that created, govern, and otherwise rules the partnership, including any amendments or modifications to any of the originals of such documents, and at least five years of partnership meeting minutes.</p>		
<p>Section 9.0 - Compliance With This Request</p>		
<p>79. Describe all sources reviewed or consulted in responding to this request, including, but not limited to:</p>		
<p>a. the name and current job title of all</p>	<p>Ron Parr, Facility Management Supervisor Bob Millican, Facility Management Specialist</p>	<p>Question 79 Attachment Q79a_PdxHarbor Contact Information.pdf</p>

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
individuals consulted;	<p>Randy Nicolay, Facility Management Specialist Dave VanBossuyt; Distribution Administration Manager Mark Cooksey, IT Client Services Manager Laura Holgate, Power Supply Eng Services Supervisor Jeddy Beasley, Transportation Services Manager Jayne Allen, Environmental Services Specialist Arya Behbehani-Divers, Environmental Services Manager Brandy Horn, Environmental Services Specialist Mike Livingston, Property Services Manager Tim Calhoun, Network Communications Supervisor – retired Mike Schwartz, Power Supply Eng Services General Manager Rand Sherwood, Utility Services Manager Tom Stodd, Environmental Services Specialist Bob Lazrine Special Tester Forman Sid Hiller – Manager Kristina Rodgers – Assistant Debby Klinger – Specialist Chuck McCartney – Specialist Alma McGloghlon – Analyst Larry Morgan – Supervisor Gwen Williams - Manager</p> <p>In addition, the attached document contains additional sources consulted for responses to selected questions.</p>	
b. the location where all sources reviewed are currently reside; and	<p>PGE's Office at: 121 SW Salmon, 1WTC1302, Portland, Oregon 97204. Records are contained in the Facilities Management Departments, the Human Resources Department, and in the Corporate Records Information System (CRIS) database.</p> <p>In addition, the Hawthorne Retiree Museum contains the following:</p> <ul style="list-style-type: none"> • The History of Portland General Electric Company, 1889 - 1981 • <u>Electrifying Eden</u> by Craig Wollner <p>The History of Portland General Electric Company, 1989 - 1981 is attached in response to Question 77, which is part of the Supplemental Submittal S1. A hardcopy of <u>Electrifying Eden</u> is provided in a separate submittal.</p>	
c. the date consulted.	Work on this information request was performed from February 2008 through March 2009.	
80. If not already provided, identify and provide a last known address or phone number for all persons, including Respondent's current and former employees or agents, other than	Wacker Substation is an unmanned substation, requiring only periodic maintenance and monthly inspections. See the responses to Questions 2, 6g, 21, 40, and 79.	See Question 6 Attachments Q06g_1980 Bullseye Article.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIC Structure Info 1982-2007.pdf

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
<p>attorneys, who have knowledge or information about the generation, use, purchase, storage, disposal, placement, or other handling of hazardous materials at, or transportation of hazardous substances, waste, or materials to or from each Property identified in response to Question 4.</p>		<p>Also see all Question 21 Attachments</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p> <p>Also see Question 79 Attachment Q79a_PdxHarbor Contact Information.pdf</p>
<p>81. If any of the documents solicited in this information request are no longer available, please indicate the reason why they are no longer available. If the records were destroyed, provide us with the following;</p>	<p>PGE Records Management Services (RMS) provides a uniform records management program for the company. The program includes the Corporate Records Information System (CRIS) an online application used by departments to identify, index and manage their records. RMS also provides records storage and retrieval and document imaging services.</p> <p>RMS can investigate why records are no longer available if we know which records are being sought. Knowing the date, originator and subject of the records in question are essential to determine their availability or their ultimate disposition.</p> <p>Each unique record category is identified in CRIS and assigned a file pattern code (file category). Information about each file category includes the office of record (originator), and retention requirements and regulatory citations – who requires the record to be kept and for how long. The PGE records program and records retention schedule comply with the recordkeeping requirements of the Oregon Public Utility Commission (PUC) and Federal Energy Regulatory Commission (FERC).</p> <p>State and federal guidelines require us to identify which records PGE produces and how and for how long those records will be retained. PGE Policy requires that records should not be destroyed before, or kept after, meeting retention requirements. Consequently, PGE regularly destroys records in the normal course of business, and when legally required to do so. Such destructions are approved by the PGE Records Retention Committee and authenticated and recorded by RMS.</p> <p>How long a particular type of record is retained is based on operating needs, legal and regulatory requirements and, in a few cases, historical or archival value.</p>	
<p>a. the document retention policy between 1937 and the present;</p>	<p>RMS was created in 1977 and we can provide PGE's records management guidelines from 1977 to the present. Prior to that time records management was the responsibility of each functional area, plant or division office. Accounting records were kept in compliance with 18 CFR Part 125, Regulations to Govern the Preservation of Records of Public Utilities and Licensees (1972), issued by the Federal Power Commission (now FERC) and NARUC, the Nat'l Assoc. of Regulatory Utility Commissioners.</p>	
<p>b. the approximate date of</p>	<p>See the response to Question 81a, above. Since it was established (c. 1977) RMS has maintained a hardcopy or microfilm record of boxes of records destroyed in the normal course</p>	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
destruction;	of business, if those records were turned over to RMS custodianship. To know <i>when</i> a record was destroyed, it is necessary to know the record category, the approximate date of creation, and which department created it. It should be noted that the level of detail of information about the records destroyed is the same as that used to identify the records when they were sent to storage.	
c. a description of the type of information that would have been contained in the documents;	See the response to Question 81b, above. RMS can help discern what records were typically filed in a particular file category. If similar records from that era exist they may show what information was captured by the documents. For example, a typical "job" form from 1980 would include much the same information listed on a similar job form from 1940, i.e., the work location, equipment used, labor hours, parts, drawings, etc.	
d. the name, job title and most current address known by you of the person(s) who would have produced these documents; the person(s) who would have been responsible for the retention of these documents; the person(s) who would have been responsible for destroying the documents; and the person(s) who had and/or still have the originals or copies of these documents; and	RMS is responsible for all records sent to the records center from 1977 to present, including ultimate disposition of those records. Records of documents destroyed include the names of the originator, authorizations for destruction (signatures) and the name of the person who physically destroyed or recycled the documents. Individual Responsibility Center (RC) managers are and would have been responsible for maintaining and disposing all other records, i.e., those that were not sent to the archives.	
e. the names and most current addresses of any person(s) who may possess documents relevant to this inquiry.	RMS can provide printed reports from the CRIS of existing records related to the request (that have been entered into CRIS by the originating RC). CRIS shows the names of all departments using the system for managing their records, what categories of records are maintained and where the records are filed (in the department or the records storage center). On request, RMS can provide a list of all RCs that use the CRIS system. This report would show each RC's file plan by document type (or subject) and the types of documents that should be filed under those headings.	
82. Provide a description of all records available to you that relate to all of the questions in this request, but which have not been included in your responses.	Multiple key word searches were performed in PGE's CRIS system. No date restrictions were placed on the searches. The results from each key word search were printed from the CRIS system with either a list of record titles or a "There are no entities to display" message. The "There are no entities to display" message means that based on the search query no records were found. Individual CRIS printouts are available upon request but provide no additional information. Documents not included in this request include: <ul style="list-style-type: none"> • Documents describing other PGE sites • PGE internal emails, correspondences, documents not specifically relevant to these questions 	

104(e) Response

Portland General Electric – Wacker Substation (April 30, 2009)

EPA Question	Response	Records/Information Available
	<ul style="list-style-type: none"> • Documents determined to be Attorney-Client privileged, which are identified on the comprehensive privilege log that will be submitted with the final set of responses. • Duplicate documents/figures • Two General Information Documents – Theory on Sand Berms and Theory on Oil Spill Containment Products • Database of OSHA reportable accidents/injuries for PGE properties in Oregon 	

CUB Exhibit 103 is confidential and was submitted to each party designated to receive confidential information pursuant to Order 16-270.