



## **PERIODIC REVIEW**

**Washington Water Power  
Central Steam Plant  
Facility Site ID#: 726**

**South Lincoln Street and West First Avenue  
Spokane, Washington 99201**

**Eastern Region Office**

**TOXICS CLEANUP PROGRAM**

**July 24, 2008**

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## 1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup site conditions and monitoring data to ensure that human health and the environment are being protected at the Washington Water Power Central Steam Plant facility (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under an amended Consent Decree that was filed in Washington State Superior Court for Spokane County on November 8, 1994, and amended on December 2, 1996. The cleanup actions resulted in residual concentrations of total petroleum hydrocarbons (TPH) and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) exceeding MTCA Method A cleanup levels for soil established under WAC 173-340-740(2) and TPH in groundwater established under WAC 173-340-720(3). WAC 173-340-420 (1) requires that “if the department selects or approves a cleanup action that results in hazardous substances remaining at a site at concentrations which exceed Method A or Method B cleanup levels established under WAC 173-340-700 through 173-340-760 or if conditional points of compliance have been established, the department shall review the cleanup action no less frequently than every five years after the initiation of such cleanup action to ensure that human health and the environment are being protected”.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(2)]:

- (a) The effectiveness of ongoing or completed cleanup actions;
- (b) New scientific information for individual hazardous substances of mixtures present at the site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the site register and provide an opportunity for public comment.

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## 2.0 SUMMARY OF SITE CONDITIONS

### 2.1 Site History

The former Washington Water Power (WWP) Central Steam Plant facility is located in the City of Spokane in Spokane County, Washington (Vicinity Map - Appendix 6.1). Site cleanup is currently being conducted under a Consent Decree, filed in November 1994 and amended in December 1996. These activities include operation and maintenance of remedial systems and quarterly compliance monitoring activities in accordance with the final compliance monitoring plan.

The site impacted by the former WWP facility is currently occupied by retail stores, restaurants, hotels, and commercial parking lots. The majority of the petroleum hydrocarbon impacted soils are covered by Steam Plant Square, Diamond Parking Lot, Davenport Parking Garage, and Rodeway Inn. Contamination was detected below the Davenport Hotel, but it was determined that these contaminated soils did not originate from the WWP facility. (Site Plan – Appendix 6.2). The facility is located in a commercial area.

The Central Steam Plant was built in 1915 and was designed to burn coal to produce steam and electric power. In the mid-1960s, all plant boilers were converted to use petroleum products. Seven concrete underground storage tanks (USTs) were constructed at the Site between 1966 and 1975 to store Bunker C fuel oil. The tanks were labeled Tank A, B, C, D, F, G and H, and ranged from 75,000-gallons to 140,000-gallons. In May 1982, workers noticed petroleum was seeping through cracks in the steam plant basement wall. Monitoring in one of the USTs detected a drop in the product level of 1.5 inches in 20 days. An investigation was completed in 1984, and Ecology determined that no further action was required.

In 1991, following the closure of the steam plant, WWP conducted additional investigations to determine if any additional releases had occurred. Thirty-nine soil borings were advanced at the Site, 13 of which were completed as groundwater monitoring wells. Data from those borings confirmed the presence of petroleum hydrocarbons containing cPAHs in soil and TPH in groundwater. Site groundwater does not constitute a practical source of drinking water and is not connected to the Spokane Valley-Rathdrum Prairie Aquifer.

Following entrance into the Consent Decree in 1994, WWP conducted a remedial investigation/feasibility study (RI/FS). An additional 37 borings were installed during RI activities; 16 of the borings were completed as monitoring wells. Ecology developed a site cleanup action plan (CAP) which was then incorporated into the amended Consent Decree in 1996. The goals of the CAP were:

1. Remove the potential for migration of contaminants of concern (COC) from Site soil containing TPH and/or cPAH concentrations above MTCA Method A cleanup levels.
2. Prevent human contact with or ingestion of Site soil containing TPH and/or cPAH concentrations above MTCA Method A cleanup levels.

3. Prevent human contact with or ingestion of Site groundwater containing TPH concentrations above MTCA Method A cleanup levels.
4. Prevent offsite migration of groundwater containing TPH concentrations above MTCA Method A cleanup levels.
5. Recover free-phase hydrocarbon product to the maximum extent practicable and in a manner that minimizes the spread of hazardous substances.
6. Protect beneficial uses of groundwater.

## 2.2 Cleanup Levels

The cleanup levels identified in the Consent Decree are the following:

- Soil - Method A cleanup levels were determined to be appropriate for the Site soils. Method A established soil cleanup levels of 200 milligrams per kilogram (mg/kg) for TPH-diesel (TPH-D), 100 mg/kg for TPH-gasoline (TPH-G), and 1 mg/kg for total cPAHs.
- Groundwater - Method A cleanup levels were determined to be appropriate for Site groundwater. The Method A cleanup level of 1,000 micrograms per liter (ug/L) was used for TPH.
- Free Product – Free product is being removed as practicable to help achieve groundwater cleanup levels.

## 2.3 Points of Compliance

The Consent Decree defines the Site as the area affected by petroleum hydrocarbons in soil above MTCA Method A cleanup levels. The point of compliance established for soil is throughout the Site, regardless of depth, to protect groundwater.

The groundwater point of compliance was established throughout the Site from the uppermost level of the saturated zone to the lowest depth that could possibly be affected by the Site. Because hazardous substances are contained on the Site, the groundwater point of compliance is established as close as practicable to the edge of the contained hazardous substances, not to exceed the northern boundary of the Steam Plant property south of Railroad Avenue.

## 2.4 Summary of Cleanup Actions

The final Site CAP presented the following activities:

1. Tank Closure and Shallow Soil Excavation – Tanks A through D were closed in accordance with WAC 173-360-385 through 398. Tanks F, G, and H were modified for use as stormwater detection tanks. Shallow soil near the Steam Plant Tanks was excavated and disposed of offsite. The resulting tank excavations were left open and used as part of the Steam Plant Square redevelopment.
2. Subsurface Barrier Wall - A subsurface barrier wall was constructed north of the Site's boundary, north of the Rodeway Inn in First Avenue, to prevent offsite migration of

hazardous substances in groundwater. Groundwater extraction wells were located upgradient to achieve hydraulic control of Site groundwater behind the subsurface barrier wall.

3. Hydraulic Control - Four groundwater extraction wells were installed to achieve hydraulic control of Site groundwater behind the subsurface barrier wall, helping to prevent potential offsite migration of soil contaminants via groundwater. Extracted water is discharged into the combined sewer overflow system (CSO).
4. Free Product Recovery – Free petroleum product was recovered from the four groundwater extraction wells and from two oil recovery wells located within the area of TPH-affected soil. Free product is continually collected from MW-1, MW-3, MW-4, MW-13, MW-26, MW-29 and OR2 using sorbent materials. Free product is recovered from three groundwater extraction wells (EW1 through EW3) and two oil recovery wells (OR1 and OR3) using belt skimmers.
5. Soil Bioventing – Bioventing wells, both injection and extraction, were installed throughout the Site to promote in situ soil treatment to the maximum extent practicable. Off-gas treatment is not necessary, as approved by the Spokane Regional Clean Air Agency, due to the low volatility of the Bunker C contaminants.
6. Stormwater Management and Paving – Paving, pavement repair/sealing, and stormwater management measures have been implemented to minimize potential mobilization of soil contaminants due to infiltrating precipitation and subsequent groundwater flow. Stormwater is collected from Diamond Parking, Steam Plant Square Redevelopment, the WWP substation and other adjacent areas and piped to WWP tanks F, G, and H for detention. After the conclusion of the storm event, pumps in the tanks discharge the water to the CSO.

#### **2.4.1 Restrictive Covenant**

Following cleanup activities, a Restrictive Covenant (Appendix 6.3) was recorded for the Site in 1997. The restrictive covenant notifies prospective purchasers of the location of contained petroleum contamination and places the following requirements on the property owner:

1. The owner must ensure that the CAP is followed, including long term monitoring and maintenance.
2. Any activity that would threaten the containment of hazardous materials is prohibited.
3. Withdrawal of groundwater is prohibited.
4. The owner must give written notice to Ecology if the owner intends to convey interest in the property.
5. No conveyance of the property can occur without adequate provisions for compliance with the CAP.
6. The owner must obtain Ecology's approval for any use of the property that is not consistent with the Restrictive Covenant.
7. The owner shall let Ecology access the property as necessary.
8. The owner may rescind the Restrictive Covenant with Ecology's consent.

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## **2.4.2 Operations and Maintenance**

Four mechanical systems operate continuously at the site. They include hydraulic control, free product recovery, bioventing, and stormwater management. Routine system maintenance is scheduled quarterly. Mechanical problems are fixed as quickly as possible. Maintenance activities are reported as they occur, and operating parameters of the four systems are reported quarterly.

## **2.4.3 Monitoring**

As required by the consent decree, long term monitoring is conducted at the site for several different parameters, including:

### **2.4.3.1 Groundwater Monitoring**

Groundwater performance monitoring is conducted quarterly to ensure no offsite migration of hazardous materials. Groundwater monitoring was scheduled for 12 quarters in the original CAP, and was to be evaluated at that time. Currently, groundwater monitoring has continued through quarter 41 due to the significant presence of free product remaining at the Site. Groundwater monitoring consists of sampling 13 wells across the Site.

### **2.4.3.2 Stormwater Monitoring**

Stormwater performance monitoring is conducted on an annual basis. Samples are collected from the detention basin in the CSO to ensure stormwater discharged to the system is in compliance with the City of Spokane discharge criteria.

### **2.4.3.3 Air Monitoring**

Air monitoring is conducted to ensure the bioventing discharge to the atmosphere is in compliance with Spokane Regional Clean Air Agency guidance.

### **2.4.3.4 Hydraulic Control Monitoring**

Hydraulic control monitoring is conducted to ensure performance of the hydraulic control system. Four piezometers were installed along the barrier wall to monitor water levels upgradient of the wall. Hydraulic control monitoring is conducted in conjunction with groundwater elevation monitoring.

### **2.4.3.5 Extracted Groundwater Monitoring**

Extracted groundwater is monitored annually for fats, oil and grease in accordance with criteria established by the City of Spokane for discharge to the CSO.

### **2.4.3.6 Free-Phase Product Monitoring**

Monitoring of free-phase petroleum product recovery volumes is performed quarterly to evaluate the performance of the product recovery system. According to the CAP, product recovery is considered impractical if less than 1 gallon of product is recovered from a well during the course of two consecutive quarters.

#### 2.4.3.7 Biovent Monitoring

Bioventing performance monitoring is conducted to optimize the efficiency of the bioventing system. Bioventing performance monitoring consists of subsurface temperature and pressure monitoring, bioventing extraction well monitoring, injected and introduced air monitoring, and soil sampling to evaluate TPH concentrations after bioventing system operation has been terminated.



## **3.0 PERIODIC REVIEW**

### **3.1 Effectiveness of completed cleanup actions**

Cleanup actions at the site were intended to eliminate human exposure to contaminated soils and groundwater at the Site. The exposure pathway to contaminated soils and free product (ingestion, direct contact) has been removed by the presence of asphalt surface and buildings on the Site, as well as the tank removal and shallow excavation conducted during the initial cleanup. The potential exposure pathway to contaminated groundwater has been removed by the ground water barrier wall, the hydraulic control system, and the restrictive covenant which prohibits use of groundwater from the Site.

The site visit conducted on June 4, 2008, showed no indications of overall integrity being compromised, no signs of undocumented site excavation or disturbance activities, and no visual signs of possible disturbance of the asphalt surface. Only one item of concern was noted during the site visit. A piezometer located in the public roadway at the eastern side of the intersection of South Lincoln Street and West First Avenue was missing the monument lid and well casing cap. The consultant for WWP was contacted immediately, and the piezometer surface completion was repaired.

The Restrictive Covenant for the Site was recorded and is in place. This Restrictive Covenant prohibits groundwater use from any well in the property, prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits other uses. This Restrictive Covenant will maintain the integrity of the Site surface and the groundwater barrier system installed during the cleanup.

#### **3.1.1 Monitoring Results**

Groundwater monitoring has been conducted quarterly for 11 years from 1997 through 2008. Groundwater monitoring has not detected TPH above 1996 MTCA Method A cleanup levels since the 29<sup>th</sup> quarter of sampling in February 2005.

The most recent sampling results submitted to Ecology were from a sampling event conducted in February 2008. Six of 13 monitoring wells contained detectable bunker C-range petroleum hydrocarbon concentrations between 0.56 and 0.83 mg/L. No samples exceeded the 1996 MTCA Method A cleanup level for bunker C of 1 mg/L. The most recent exceedance of MTCA Method A cleanup levels occurred in February 2005 during quarterly monitoring event number 29, when MW-06 and MW-18 had TPH concentrations of 1.5 and 1.9 mg/L, respectively. Lab analysis indicated that these concentrations likely did not fall within the spectrum of TPH-D, motor oil or bunker C. Based on this data, the institutional controls being used are effectively preventing the spread of contaminated groundwater downgradient from the Site.

Free-product continues to be recovered in significant quantities. Approximately 315 gallons of free product were recovered by belt skimmer from five extraction wells at the Site in 2007. For

comparison, 349 gallons were recovered by belt skimmer from the same five wells in 1999 and 348 gallons were recovered by belt skimmer from the same five extraction wells in 2003.

Conclusions:

Soils with TPH concentrations higher than MTCA Method A cleanup levels are still present at the Site. Free product is still present at the Site and continues to be recovered in significant quantities. However, the structures and asphalt surface prevent human exposure to this contamination by ingestion and direct contact with soils. The Restrictive Covenant will ensure that contaminated groundwater from the site will not spread or be extracted for use, and the integrity of the protective surfaces will be protected through maintaining the current use of the Site. The hydraulic barrier wall, and active hydraulic control being used at the property, will ensure that contaminated groundwater from the site will not spread and cause additional downgradient impacts.

### **3.2 New scientific information for individual hazardous substances for mixtures present at the Site**

There is no new scientific information for the petroleum contaminants related to the Site.

### **3.3 New applicable state and federal laws for hazardous substances present at the Site**

This cleanup is governed by Chapter 173-340 WAC (1996 ed.). This regulation was amended in 2001. Although TPH cleanup levels changed as a result of this modification, site cleanup levels determined in the CAP will not change. WAC 173-340-702(12) (c) [2001 ed.] provides that,

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

Although cleanup levels changed for gasoline, diesel, and volatile organic compounds as a result of modifications to MTCA in 2001, contamination remains at the site above MTCA Method A cleanup levels, and the cleanup action is still protective of human health and the environment.

### **3.4 Current and projected site use**

The site is currently used for commercial and industrial purposes. There have been no changes in current or projected future site or resource uses.

### **3.5 Availability and practicability of higher preference technologies**

The remedy implemented included containment of hazardous substances, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

### **3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels**

The analytical methods used at the time of the remedial action were capable of detection below MTCA Method A cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the site.

## **4.0 CONCLUSIONS**

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soils cleanup levels have not been met at the Site; however, under WAC 173-340-740(6)(d), the cleanup action is determined to comply with cleanup standards since the long-term integrity of the containment system is ensured and the requirements for containment technologies in WAC 173-340-360(8) have been met.
- The Restrictive Covenant for the property is in place and will be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant have been satisfactorily completed. It is the property owner's responsibility to continue to inspect the Site to ensure that the integrity of the cap is maintained. Monitoring of groundwater, stormwater discharge, hydraulic control, free product, air-discharge, and extracted groundwater should continue until the terms of the CAP have been met.

### **4.1 Next Review**

The next review for the site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

## **5.0 REFERENCES**

Ecology, 1994, Consent Decree

Ecology 1996, Amended Consent Decree

Ecology, 1997, Restrictive Covenant

Ecology, 2008, Site Visit

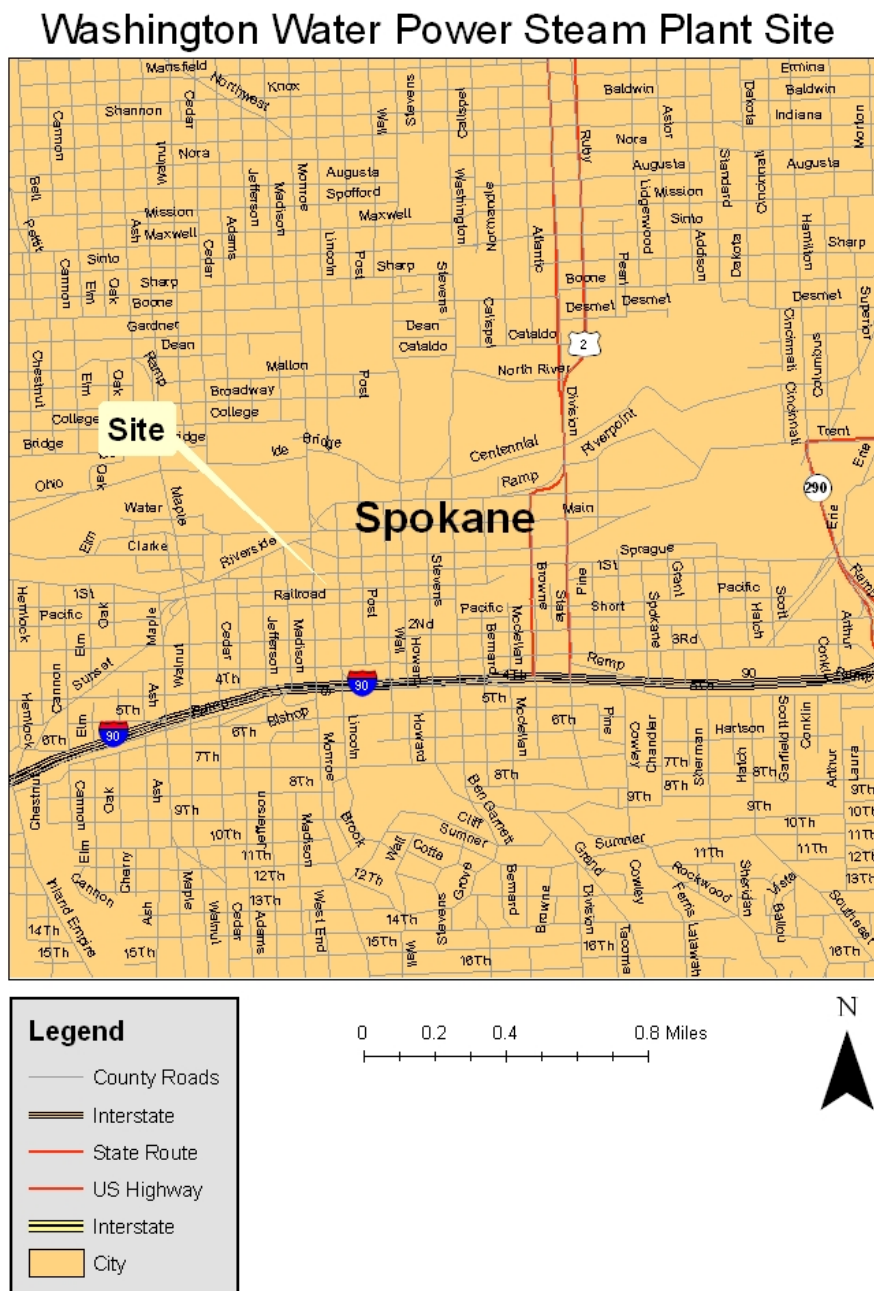
Landau Associates, 1998-2008, Groundwater Monitoring Data

Landau Associates, 1998-2008, O&M Monitoring Data

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## **6.0 APPENDICES**

## 6.1 Vicinity Map



## 6.2 Site Plan

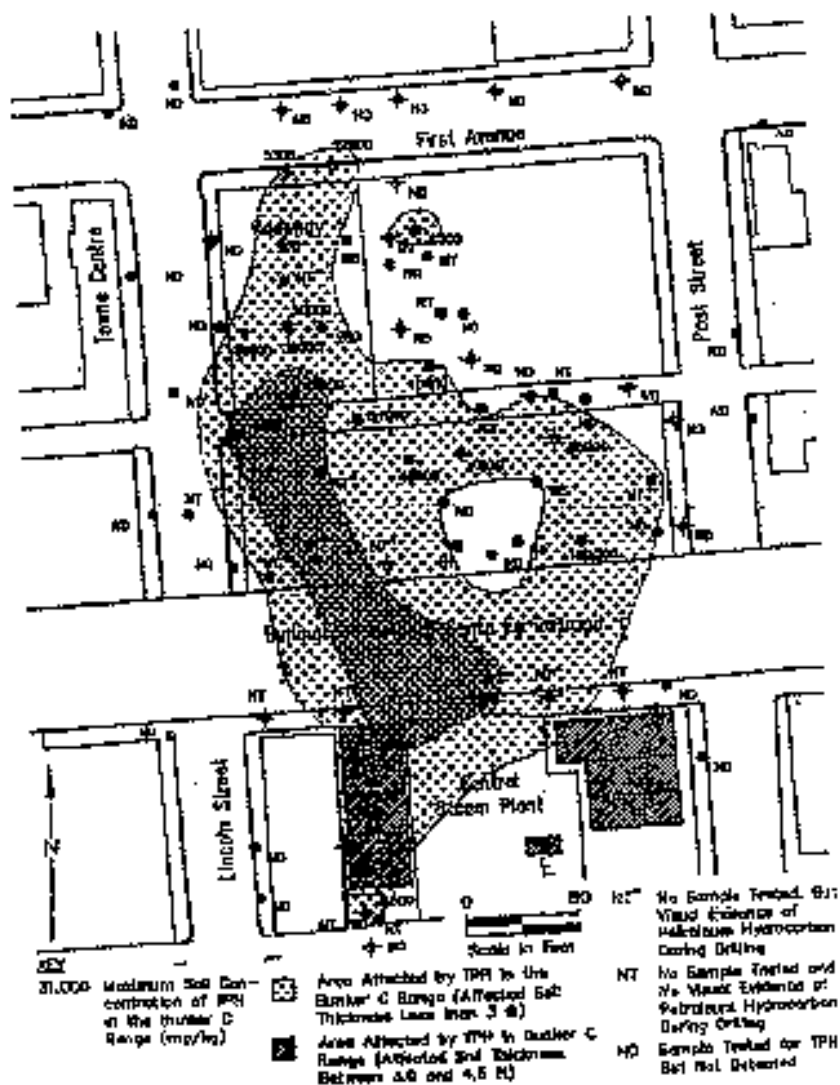


Exhibit A to the Remediation Agreement



## 6.3 Groundwater Monitoring Data

Groundwater Sampling Results WWP Central Steam Plant Oil Spill Remediation												
Sampling Event	MW-006			MW-007			MW-012			MW-018		
	Diesel	Oil	Bunker C	Diesel	Oil	Bunker C	Diesel	Oil	Bunker C	Diesel	Oil	Bunker C
QM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM5	0.8 *	ND	1.8 *	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM18	ND	ND	0.78	ND	ND	0.53 *	ND	ND	ND	ND	ND	ND
QM19	ND	ND	0.53 *	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM21 Resample	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM22	ND	ND	0.84 *	ND	ND	1.2 *	ND	ND	1.0 *	ND	ND	ND
QM23	ND	ND	0.65	ND	ND	0.54 *	ND	ND	1.3	ND	ND	ND
QM24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM26	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM29 (Silica gel cleanup)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM34	ND	ND	0.60 *	ND	ND	ND	ND	ND	0.66 *	ND	ND	ND
QM35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reporting Units (mg/l)	0.25	0.5	0.5	0.25	0.5	0.5	0.25	0.5	0.5	0.25	0.5	0.5
Performance Standard (mg/l)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Notes:  
Units milligrams per liter (mg/l).  
ND = not detected.  
-- = Not analyzed or not sampled.  
Beginning with QM-31, all analysis includes silica gel cleanup  
\* In the opinion of the laboratory analyst, these results did not match the chromatograph of diesel, Bunker C or motor oil.  
(a) Denotes a field duplicate sample for well listed in parenthesis.

Groundwater Sampling Results  
WWP Central Steam Plant  
Oil Spill Remediation

Sampling Event	MW-017			MW-018			MW-020			MW-021		
	Diesel	Oil	Bunker C	Diesel	Oil	Bunker C	Diesel	Oil	Bunker C	Diesel	Oil	Bunker C
QM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM4-S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM15	-	-	-	-	-	-	-	-	-	-	-	-
QM17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM19	-	-	-	-	-	-	-	-	-	-	-	-
QM21	ND	ND	ND	ND	ND	0.72	ND	ND	ND	ND	ND	ND
QM21 Resample	-	-	-	-	-	-	-	-	-	-	-	-
QM23	-	-	-	-	-	-	-	-	-	-	-	-
QM25	ND	ND	0.51 *	0.39 *	3.0 *	6.4 *	ND	ND	ND	ND	ND	ND
QM27	-	-	-	-	-	-	-	-	-	-	-	-
QM29	ND	ND	ND	ND	ND	1.5 *	ND	ND	ND	ND	ND	ND
QM29 (Silica gel cleanup)	-	-	-	-	-	-	-	-	-	-	-	-
QM31	-	-	-	-	-	-	-	-	-	-	-	-
QM33	ND	ND	ND	ND	ND	0.51 *	ND	ND	ND	ND	ND	ND
QM35	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	0.57 *
QM37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reporting Units (mg/l)	0.25	0.5	0.5	0.25	0.5	0.5	0.25	0.5	0.5	0.25	0.5	0.5
Performance Standard (mg/l)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Notes:  
Units milligrams per liter (mg/l).  
ND = not detected.  
- = Not analyzed or not sampled.  
Beginning with QM31, all analysis includes silica gel cleanup.  
\* In the opinion of the laboratory analyst, these results did not match the chromatograph of diesel, Bunker C or motor oil.  
(a) Denotes a field duplicate sample or well listed in parenthesis.

Groundwater Sampling Results  
WWP Central Steam Plant

Sampling Event	Oil Soil Remediation										Duplicate (%)									
	MW-023					MW-025					MW-027					Duplicate (%)				
	Diesel	Oil	Bunker C	Diesel	Oil	Diesel	Oil	Bunker C	Diesel	Oil	Diesel	Oil	Bunker C	Diesel	Oil	Diesel	Oil	Bunker C	Diesel	Oil
QM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM21 Resample	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM29 (Silica gel cleanup)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
QM39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reporting Units (mg/l)	0.25	0.5	0.5	0.25	0.5	0.25	0.5	0.5	0.25	0.5	0.25	0.5	0.5	0.25	0.5	0.25	0.5	0.5	0.25	0.5
Performance Standard (mg/l)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Notes:  
Units milligrams per liter (mg/l).  
ND = not detected.  
- = Not analyzed or not sampled.

Beginning with QM-31, all analysis includes silica gel cleanup  
\* In the opinion of the laboratory analyst, these results did not match the chromatograph of diesel, Bunker C or motor oil.  
(a) Denotes a field duplicate sample for well listed in parenthesis.

Groundwater Sampling Results  
WWP Central Steam Plant

Sampling Event		Oil Spill Remediation						
		MW-028			MW-030		Duplicate Location	
		Diesel	Oil	Bunker C	Diesel	Oil	Bunker C	
QM1 QM2 QM3 QM4 QM4s QM5 QM6 QM7 QM8 QM9 QM10 QM11 QM12 QM13 QM15 QM17 QM19 QM21 QM21 Resample QM23 QM25 QM27 QM29 QM29 (Silica gel cleanup) QM31 QM33 QM35 QM37 QM39	QM1	ND	ND	ND	ND	ND	ND	MW-27
	QM2	ND	ND	ND	ND	ND	ND	MW-27
	QM3	ND	ND	ND	ND	ND	ND	MW-27
	QM4	ND	ND	ND	ND	ND	ND	MW-27
	QM4s	0.26	ND	0.66	ND	ND	ND	MW-27
	QM5	ND	ND	0.66	ND	ND	ND	MW-27
	QM6	0.26 *	ND	0.66 *	ND	ND	ND	MW-27
	QM7	0.36 *	ND	0.92 *	ND	ND	ND	MW-27
	QM8	0.32 *	ND	0.84 *	ND	ND	ND	MW-27
	QM9	0.37 *	ND	0.78 *	ND	ND	ND	MW-27
	QM10	0.42 *	ND	1.0 *	ND	ND	ND	MW-27
	QM11	0.3 *	ND	1.0 *	ND	ND	ND	MW-27
	QM12	0.42 *	ND	0.8 *	ND	ND	ND	MW-27
	QM13	0.82 *	0.66 *	2.4 *	ND	ND	ND	MW-27
	QM15	0.68 *	ND	2.2 *	ND	ND	ND	MW-27
	QM17	0.42 *	ND	1.1 *	ND	ND	ND	MW-27
	QM19	ND	ND	0.83 *	ND	ND	ND	MW-27
	QM21	ND	ND	ND	ND	ND	ND	MW-27
	QM21 Resample		-	-	-	-	-	-
QM23		ND	ND	ND	ND	ND	ND	MW-27
QM25		ND	ND	0.73 *	ND	ND	0.64 *	MW-27
QM27		ND	ND	ND	ND	ND	ND	MW-25
QM29		ND	ND	ND	ND	ND	ND	MW-27
QM29 (Silica gel cleanup)		-	-	-	ND	ND	0.51 *	--
QM31		ND	ND	ND	ND	ND	ND	MW-27
QM33		ND	ND	ND	ND	ND	ND	MW-27
QM35		ND	ND	ND	ND	ND	ND	MW-27
QM37		ND	ND	ND	ND	ND	ND	MW-27
QM39		ND	ND	ND	ND	ND	ND	MW-27
Reporting Units (mg/l)		0.25	0.5	0.5	0.25	0.5	0.5	
Performance Standard (mg/l)		1.0	1.0	1.0	1.0	1.0	1.0	

Notes:  
Units milligrams per liter (mg/l).  
ND = not detected.  
- = Not analyzed or not sampled.  
Beginning with QM-31, all analysis includes silica gel cleanup  
\* In the opinion of the laboratory analyst, these results did not match the chromatograph of diesel, Bunker C or motor oil.  
(a) Denotes a field duplicate sample for well listed in parentheses.

## 6.4 Environmental Covenant



Filed for Record at Request of:

Jerry K. Boyd  
Paine, Hamblen, Coffin, Brooke & Miller LLP  
717 W. Sprague, #1200  
Spokane, WA. 99204

### Indexing Data

Document title: RESTRICTIVE COVENANT CONCERNING THE  
WASHINGTON WATER POWER CENTRAL STEAM PLANT  
OIL SPILL

Reference numbers of related documents: None

Grantor:  
1. Washington Irrigation and Development Company, a  
Washington corporation,

Grantee:  
1. The Washington Water Power Company, a Washington  
corporation

### Legal Description:

1. Lots 1, 2, 3, and the South 77.5 feet of the West Half  
of Lot 4, Block 16, RAILROAD ADDITION
2. Additional legal description is on page 2 of document

Assessor's Property Tax Parcel Account Number(s):

35192.0901; 35192.0902; 35192.0903

For and in consideration of TEN DOLLARS (\$10.00) in hand  
received, and for other good and valuable consideration,  
Washington Irrigation and Development Company, a Washington

N.E. Exempt Tax Exempt

Date: 12/20/07

Spokane County Treasurer

By: J. K. Boyd



corporation with offices located in Spokane, Washington, hereby grants and issues a Restrictive Covenant for the benefit of The Washington Water Power Company with respect to certain property, hereinafter referred to as "Property."

The Property that is the subject of this Restrictive Covenant has been the subject of a remedial action pursuant to the Model Toxics Control Act (MTCOA), RCW 70.1050. The remedial action undertaken to clean up the Property (hereafter referred to as the "Cleanup Action") is described in the Final Cleanup Action Plan which is an attachment to the Amended Consent Decree filed in Spokane Superior Court, No. 94-2-05788-4. These documents, including any attachments, are on file at the State of Washington Department of Ecology ("Ecology") at the Eastern Regional Office in Spokane, Washington.

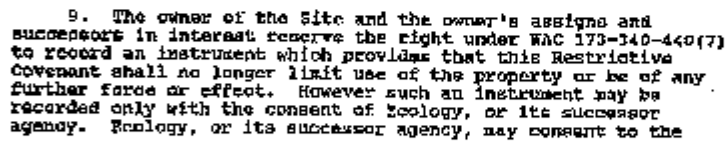
This restrictive covenant is required by Ecology as defined in WAC 173-340-740 because the Cleanup Action resulted in residual concentrations of petroleum hydrocarbons and polynuclear aromatic hydrocarbons which exceed the Model Toxics Control Act Method A Cleanup levels for soil established under WAC 173-340-740 and petroleum hydrocarbons which exceed the Model Toxics Control Act Method A Cleanup levels for ground water established under WAC 173-340-720.

The undersigned, Washington Irrigation and Development Company ("WIDCo"), is the fee owner of real property in the County of Spokane, State of Washington. The legal description of the Property is as follows:

Lots 1, 2, 3, and the South 77.5 feet of the West Half of Lot 4, Block 16, RAILROAD ADDITION, according to plat recorded in Volume "D" of plats, Page 82, in the City of Spokane, Spokane County, State of Washington.

WIDCo makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owner of any portion of or interest in the Site.

1. The residual contamination that is the subject of this restrictive covenant consists of petroleum hydrocarbons and polynuclear aromatic hydrocarbons and is located in the area shown in Exhibit "A". Remediation or removal of these contaminants must be addressed before the owner or successor owner alters or modifies the property in any manner that causes the residual contamination to be exposed or accessible.





recording of such an instrument only after appropriate public notice and comment.

Executed as of the 29<sup>th</sup> day of December 1997.

PROPERTY OWNER: WASHINGTON IRRIGATION AND  
DEVELOPMENT COMPANY

Ronald R. Peterson  
President

Attachments:  
Exhibit A-Area of Containment

STATE OF WASHINGTON )  
COUNTY OF SPOKANE ) ss.

On this 29<sup>th</sup> day of December 1997, before me, a Notary Public in and for the State of Washington, personally appeared Ronald R. Peterson, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed this instrument, on oath state that he was authorized to execute the instrument, and acknowledged it as the President of Washington Irrigation and Development Company to be the free and voluntary act and deed of said corporation for the uses and purposes mentioned in the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year first above written.



Patricia J. Whalen  
Print Name PATRICIA J. WHALEN  
NOTARY PUBLIC in and for the State  
of Washington, residing at Spokane  
My appointment expires 7-31-98



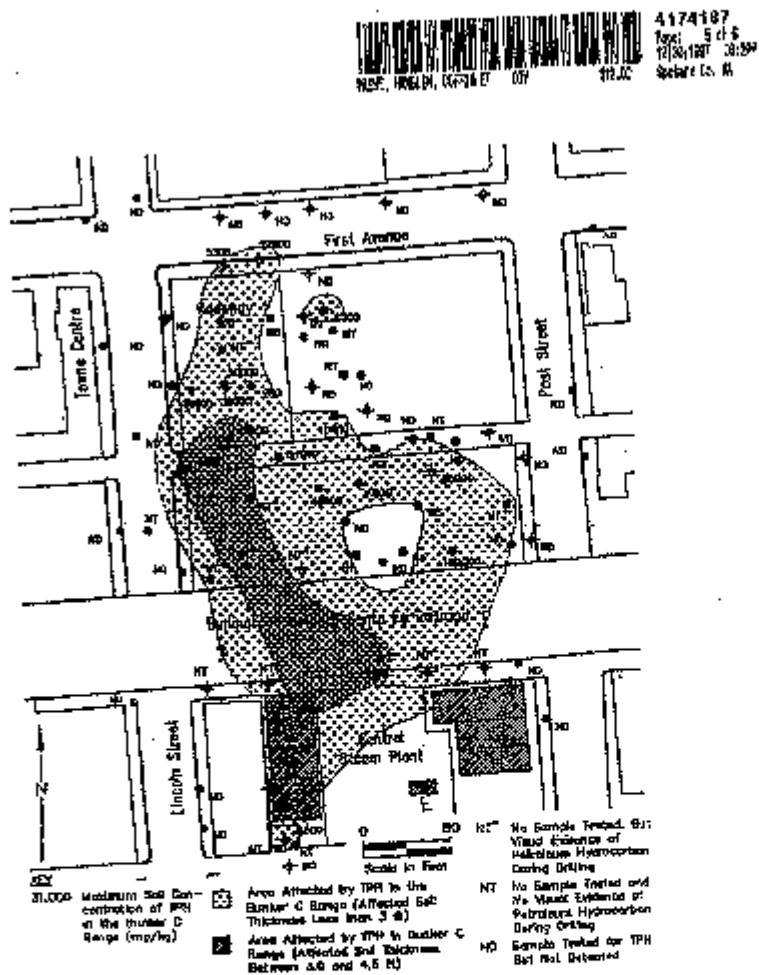


Exhibit A to the Restrictive Covenant

## 6.5 Photo log

**Photo 1: Steam Plant Square Parking Lot - from the southwest**



**Photo 2: Extraction Well Vault in Parking Lot - from the northwest**



**Photo 3: Lower Parking Lot Across from Davenport Hotel - from the south**



**Photo 4: Western Property Sidewalk – from the north**

