September 12, 2007 10077.009

Oregon Department of Environmental Quality Northwest Region 2020 SW Fourth Avenue Suite 400 Portland, Oregon 97201-4987

VIA Email

Attention:

Anna Coates

Subject:

Progress Report – April-August 2007

Remedial Investigation/Feasibility Study/Interim Removal Action Measures

Astoria Area-Wide Petroleum Site

Astoria, Oregon

DEQ ECSI File #2277

Dear Ms. Coates:

This letter presents the progress made by the PRP Group during April to August 2007 on the RI/FS and IRAM development at the Astoria Area-Wide Petroleum Site in Astoria, Oregon. This work is being conducted in response to DEQ Order No. ECSR-NWR-01-11.

WORK COMPLETED IN APRIL-AUGUST 2007

Successive drafts of the RI Report were delivered to the PRP Group for review in May and August 2007. Comments have been addressed and a final Draft RI Report for submittal to the DEQ is in preparation. We anticipate that the Draft RI Report will be delivered to DEQ the week of September 17. An updated project schedule is attached to this progress report.

Development activity was conducted under the approved Contaminated Media Management Plan (CMMP) at the former Mobil/Niemi bulk plant by Riverlands, LLC. Cowlitz Clean Sweep (CCS) conducted work in areas where petroleum hydrocarbons were observed in soil. A soil stockpile amounting to about 445 cubic yards (620 tons) was disposed at Hillsboro Landfill on April 12 and 13, 2007.

Approval with comment of the proposed design specification for the IRAM at the former Mobil/Niemi bulk plant was received by DEQ on February 20, 2007. A response to these comments was prepared and submitted to the DEQ on May 14, 2007.

A bid package to construct the IRAM at the former Mobil/Niemi bulk plant was issued to three contractors in August. Bids were received, evaluated by RSV Engineering, and found to be unacceptably expensive for the scope of work desired. Inquiries to other contractors have been made. Twenty-three soil vapor extraction wells were installed in accordance with

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Ms. Anna Coates September 12, 2007 Page 2

the IRAM design specifications. Two monitoring wells within the footprint of the new building were abandoned (MW-45 and MW-51), and one monitoring well with a compromised seal as a result of grade changes was overdrilled and reconstructed (MW-40) in August.

A technical memorandum describing two rounds of sub-slab sampling at the Port office building was completed for review by the PRP Group in August. The final report will be included as an appendix to the RI Report.

The human health risk assessment (HHRA) was completed for inclusion in the draft RI Report to be submitted to DEQ in September.

CCS of Astoria, Oregon, performed monthly maintenance on the enhanced synthetic and floating absorbent boom system installed in Slip 2. A new absorbent boom is scheduled for installation in September. Absorbent socks in monitoring wells containing free product were replaced monthly by CCS.

Meetings of the PRP Group representatives were held on April 5 and May 3, 2007. A meeting with DEQ was held on May 17, 2007. The next DEQ meeting is scheduled for, September 13, 2007.

WORK PLANNED FOR SEPTEMBER AND OCTOBER 2007

Active project work tasks include the following:

- Continued maintenance of the absorbent boom system in Slip 2;
- > Continued replacement of absorbent socks in monitoring wells containing LNAPL;
- > Documentation of the soil removal event in April
- ➤ Construction of the IRAM for the redevelopment at the former Mobil/Niemi bulk plant property;
- ➤ Documentation of reconstruction and abandonment of monitoring wells at the former Mobil/Niemi Oil bulk plant will be submitted to DEQ;
- > Submittal of the Draft RI Report to the DEQ after incorporating final comments from the PRP Group; and
- > Development of the approach to the Feasibility Study.

PROBLEMS ENCOUNTERED AND RESOLUTIONS

There were no problems requiring resolution during the reporting period.

Ms. Anna Coates September 12, 2007 Page 3



CLOSING COMMENTS

Please call me at (503)768-5121 if you have any questions or comments regarding this progress report.

Sincerely,

EnviroLogic Resources, Inc.

Thomas J. Calabrese, RG, CWRE

Principal/Hydrogeologist

Project Manager

cc: Distribution list attached

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ASTORIA AREA-WIDE PETROLEUM SITE Distribution List

- 1 Anna Coates, DEQ Project Manager, Site Response
- 1 Ron Larsen, Port of Astoria
- 1 Tom Calabrese, EnviroLogic Resources, Inc., Consultant for AAW PRP Group
- 1 Max Miller, Tonkon Torp, Attorney for McCall Oil and Chemical Corporation
- 1 Ted McCall, McCall Oil and Chemical Corporation
- 1 John Edwards, Anchor Environmental, LLC, Consultant for McCall Oil and Chemical Corp
- 1 Cary E. Bechtolt, Niemi Oil Company
- 1 Jeff B. Kray, Marten Law Group, PLLC, Attorney for Niemi Oil Company
- 1 Kurt Harrington, AMEC, Inc., Consultant for Niemi Oil Company
- 1 Ed Platt, Shell Oil Company
- 1 Rick Glick, Davis Wright Tremaine, Attorney for Shell Oil Company
- 1 Leon Lahiere, Hart Crowser, Consultant for Shell Oil Company
- 1 Brian Harris, Harris Enterprises
- 1 Larry Vandermay, Flying Dutchman
- 1 David Bartz & Laura Maffei, Schwabe Williamson & Wyatt, Attorney for Flying Dutchman
- 1 Hong Huynh, Miller Nash, Attorney for Harris Enterprises
- 1 Lon Yandell, Kleinfelder, Consultant for Harris Enterprises
- 1 Richard Delphia, Delphia Oil Company
- 1 Chuck Smith, Attorney for Delphia Oil Company
- 1 Alistaire Clary, Maul Foster Alongi, Consultant for Delphia Oil Company
- 1 Darin Rouse, Chevron Environmental Management Company
- 1 Soniya Ziegler, Attorney for Chevron Environmental Management Company
- 1 Grant Sprick, ARCADIS US, Inc., Consultant for Chevron Environ. Management Co.
- 1 Gerry Koschal, ARCADIS US, Inc., Consultant for Chevron Environ. Management Co.
- 1 Robin Seguin, Owest Communications International, Inc.
- 1 David Bledsoe, Perkins Coie LLP, Attorney for Owest Communications International, Inc.
- 1 Anita W. Lovely, Lovely Consulting, Inc., Consultant for ExxonMobil Corporation
- 1 Information Repository

UPDATED SCHEDULE (9/12/07)

Remedial Investigation/Feasibility Study Astoria Area-Wide Petroleum Site Astoria, Oregon

	Asiona, or	ogo				
1D	Task Description	Duration	Start	Finish	Complete	Predecessors
1	ASTORIA AREA-WIDE PETROLEUM STUDY	1666 days	1/9/2002	8/6/2008		1
2		1000 days	HUNEGUE	010/2000		1
3	DIFE and IDAM DODOCAL	44.3.	4 (0 (0 0 0 0	4/04/0000	4000/	
	RI/FS and IRAM PROPOSAL	11 days	1/9/2002	1/21/2002	100%	1
4						1
17						
18	RI/FS and IRAM DEVELOPMENT WORK PLAN	124 days	1/9/2002	7/1/2002	100%	1
19	1	,-	.,,,,,,,,,	71 // ACCM	,	1
58						1
	BUACE 4/0 DUFO and IDAM WODY DUAN (SED) PARTNER TON	4-66	4/010000	410010000		
59	PHASE 1/2 RI/FS and IRAM WORK PLAN IMPLEMENTATION	1530 days	1/9/2002	1/29/2008		1
60						1
61	SOURCE/SOIL CHARACTERIZATION	709 days	1/9/2002	11/1/2004	100%	
124		•				i
125	GROUND-WATER CHARACTERIZATION	1296 days	8/12/2002	10/4/2007	100%	
126	Water-Level Measurement Program				100/6	1
		524 days	8/12/2002	9/14/2004		
157	Beneficial Ground Water and Land Use Studies	126 days	8/27/2002	2/21/2003		
164	Monitoring-Well Installation Program	365 days	8/20/2002	2/5/2004		
185	Quarterly Ground-Water Monitoring Program	281 days	10/8/2003	11/23/2004		-
230	Hydraulic Characterization Program (NOT CURRENTLY PLANNED)	46 days	3/1/2004	5/4/2004		1
238	Monitoring Well Maintenance	456 days	12/19/2005	10/4/2007	95%	1
239						
	Abandon MW-46, 47, and 48/Maintenance MW 17, 18, and 29	115 days	12/19/2005	6/2/2006	100%	1
252	Abandon MW 35, 39, and 45	239 days	10/30/2006	10/4/2007	95%	1
253	Draft Work Plan	4 days	10/30/2006	11/2/2006		i
254	PRP Group Review	3 days	11/3/2006	11/7/2006		253
255	Final Work Plan	2 days	11/8/2006	11/9/2006		254
256	Mobilization/Demobilization	1 day	12/5/2006	12/5/2006		255FS+15 days
257	Well Abandonment MW-35,39	2 days	12/6/2006	12/7/2006		256 256 256 256
258						
	DW Management	20 days	12/8/2006	1/9/2007		257
259	Well Abandonment MW-45	2 days	8/17/2007	8/20/2007		258,611SS
260	Draft Reconstruction/Abandonment Documentation	25 days	8/21/2007	9/24/2007		259
261	PRP Group Review	5 days	9/25/2007	10/1/2007		260
262	Final Reconstruction/Abandonment Documention	2 days	10/2/2007	10/3/2007		261
263	Submittal to DEQ	1 day	10/4/2007	10/4/2007		262
264	Project Management	49 days	10/30/2006	1/11/2007		253SS
265					A=0/	20000
	Reconstruct MW-30, 31, and 40	128 days	4/9/2007	10/3/2007	95%	
266	Letter to DEQ	5 days	4/9/2007	4/13/2007		
267	Mobilization/Demobilization	1 day	8/17/2007	8/17/2007		266FS+10 days,610
268	Well Reconstruction	1 day	8/20/2007	8/20/2007		267
269	Wellhead Re-Survey/Update Documentation	2 days	9/25/2007	9/26/2007		268FS+10 days,260
270	Submittal to DEQ	5 days	9/27/2007	10/3/2007		269
271		o dayo	3/2//2001	10/0/2007		200
272	STORM/SURFACE WATER CHARACTERIZATION	#06 d	0/40/0000	4010010004	4000/	
	STORMISURFACE WATER CHARACTERIZATION	586 days	8/19/2002	12/20/2004	100%	
322						
323	SEDIMENT CHARACTERIZATION	100 days	6/13/2003	11/4/2003	100%	
335		•				į
336	IRAM DEVELOPMENT	1419 days	5/13/2002	12/28/2007		
337	Indoor Air Quality IRAM Development	1187 days	12/27/2002	9/18/2007		
338					4000	0.4
	Comparison of Soil Data to Screening Levels	10 days	12/27/2002	1/10/2003	100%	81
339	Indoor Air IRAM Development	1101 days	4/30/2003	9/18/2007		
340	Air Quality Sampling Work Plan	299 days	4/30/2003	7/15/2004	100%	
347	Vapor Intrusion Pathway Sampling	180 days	8/20/2004	5/9/2005	100%	167
367	Sub-Slab Sampling	613 days	4/18/2005	9/18/2007	95%	1:
368	Draft Sub-Slab Sampling Work Plan Preparation	32 days	4/18/2005	6/1/2005	100%	[:
369	PRP Group Review					260
		5 days	6/2/2005	6/8/2005	100%	
370	Final Sub-Slab Sampling Work Plan	10 days	6/9/2005	6/22/2005	100%	
371	Submittal to DEQ	1 day	6/23/2005	6/23/2005	100%	
372	Sub-Slab Probe Installation	3 days	8/9/2005	8/11/2005		371FS+30 days
373	Soil Vapor Sampling	2 days	8/12/2005	8/15/2005	100%	372
374	Laboratory Analyses	10 days	8/16/2005	8/29/2005	100%	
375	Data Validation	10 days	8/30/2005	9/13/2005	100%	
376	Anaytical Data Compilation	5 days	9/14/2005	9/20/2005	100%	
377	Draft Sub-Slab Sampling TM	40 days	10/19/2005	12/15/2005		376FS+20 days
378					OU76	
	PRP Group Review	5 days	12/16/2005	12/22/2005		377
379	Final Sub-Slab Sampling TM	5 days	12/27/2005	1/3/2006		378
380	Submittal to DEQ	1 day	1/4/2006	1/4/2006		379
381	Round 2 Sub Slab Sampling	445 days	12/16/2005	9/18/2007	95%	!
382	Authorization to Proceed	50 days	12/16/2005	3/1/2006		377
383	Mitigation System Eval, Telecons, Pressure Monitorino	100 days	3/2/2006	7/24/2006		382
384	Confirmation from DEQ re Spatial/Temporal Distributio	1 day	5/10/2006	5/10/2006		
385	Mobilization	15 days		9/11/2006		382,384
386	Sub-Siab Probe Installation		8/21/2006			
		1 day	9/18/2006	9/18/2006		385FS+4 days
387	Soil Vapor Sampling	1 day	9/18/2006	9/18/2006		386SS
388	Laboratory Analyses	10 days	9/19/2006	10/2/2006		387
389	Data Validation	5 days	10/3/2006	10/9/2006		388
390	Anaytical Data Compilation	5 days	10/10/2006	10/16/2006		389
391	Draft R1 and R2 Sub-Slab Sampling Data TM	200 days	10/17/2006	7/30/2007		390
392	PRP Group Review					391
		10 days	7/31/2007	8/13/2007		
393	Final R1 and R2 Sub-Slab Sampling Data TM	5 days	9/11/2007	9/17/2007		392,863FF
394	Submittal to DEQ	1 day	9/18/2007	9/18/2007		393,861
395	HVAC Adjustments - IRAM	160 days	2/28/2005	10/13/2005	100%	[]
403	HYDROCARBON SEEP IRAM DEVELOPMENT	1145 days	6/12/2003	12/28/2007		[]
404	Ball-Down Testing	3 days	6/12/2003	6/16/2003	100%	139
405	Water Quality Sampling at Seep MWs	2 days				
406			6/17/2003	6/18/2003	100%	707
400	Product Removal	125 days	6/16/2003	12/15/2003	100%	
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UPDATED SCHEDULE (9/12/07)

Remedial Investigation/Feasibility Study Astoria Area-Wide Petroleum Site Astoria, Oregon

	The December			Ptoles		Desdesses
1D 414	Task Description 2004 A Product Removal	Duration	Start	Finish 6/10/2004	Complete 100%	Predecessors
421	2004 B Product Removal	107 days 106 days	1/12/2004 7/19/2004	12/16/2004	100%	
428	2005 Product Removal		3/30/2005	1/4/2004	100%	}
439	2006 Product Removal	192 days 234 days	1/30/2006	1/4/2007	100%	1
452	2007 Product Removal	240 days	1/29/2007	12/28/2007	70%	1
465	Hydrocarbon Seep IRAM Work Plan		6/17/2003	9/22/2003	100%	
471	Hydrocarbon Seep IRAM Inplementation	67 days			100 /6	1
472		1031 days	11/24/2003 11/24/2003	12/28/2007 9/24/2004	100%	1
481	IRAM Design/Build O&M 2005 Month	206 days		12/12/2005	100%	
492	O&M Boom 2006	192 days	3/10/2005			
505		230 days	1/30/2006	12/28/2006	100% 70%	
518	O&M Boom 2007	240 days	1/29/2007	12/28/2007	100%	
535	Upland Data Collection Additional Product Characterization	401 days	1/23/2004	8/25/2005	100%	
557	Balldown Testing/Water Level Monitoring	229 days	2/24/2005	1/23/2006 6/5/2006	100%	
565	TANK-BOTTOM WASTE IRAM DEVELOPMENT (McCALL BP)	15 days 1359 days	5/15/2006 5/13/2002	10/5/2007	95%	Ī
566	Technology Screening	10 days	5/13/2002	5/24/2002	9970	44
567	Detailed Evaluation of Alternatives	10 days	5/28/2002	6/10/2002		566
568	Implementation Plan Proposal	5 days	6/11/2002	6/17/2002		567
569	Review IRAM Implementation Report	5 days	10/1/2007	10/5/2007		167FS+1109 days
570	FORMER MOBIL/NIEMI BULK PLANT IRAM	835 days	9/7/2004	12/24/2007		7077 0 1 7 100 00,0
571	IRAM Work Plan	120 days	9/7/2004	3/1/2005	100%	
578	UST Removal	48 days	9/20/2004	11/24/2004	100%	
596	IRAM implementation	715 days	3/2/2005	12/24/2007		
597	Vapor Barrier/Extraction Design	536 days	3/2/2005	4/17/2007	100%	
608	Vapor Barrier/Extraction Construction	123 days	4/18/2007	10/5/2007	25%	
609	Contracting	85 days	4/18/2007	8/14/2007	95%	606
610	Mobilization/Demobilization	2 days	8/15/2007	8/16/2007		605FS+40 days,609
611	Drilling/SVE Well Installation	5 days	8/17/2007	8/23/2007	100%	
612	Vapor Barrier Construction Oversight	10 days	9/24/2007	10/5/2007		610
613	Contaminated Media Management Plan	123 days	6/29/2006	12/27/2006	100%	
623	Site Preparation Support	299 days	8/8/2006	10/8/2007		
624	Soil Stockpile Removal	3 days	9/6/2006	9/8/2006	100%	617FS+20 days
625	Subsurface Structure Removal	3 days	8/8/2006	8/10/2006	100%	617
626	Prepare documentation	20 days	11/16/2006	12/15/2006	100%	620SS
627	PRP Group Review	5 days	12/18/2006	12/26/2006	100%	
628	Submittal to DEQ	1 day	12/27/2006	12/27/2006	100%	627
629	Soli Stockplie 2	191 days	1/15/2007	10/8/2007		
630	Excavation Oversight	10 days	1/15/2007	1/26/2007	100%	
631	Soil Stockpile Removal 2	10 days	4/2/2007	4/13/2007		630FS+45 days
632	Prepare Documentation 2	60 days	7/9/2007	9/28/2007	25%	631FS+60 days
633	PRP Group Review	5 days	10/1/2007	10/5/2007		632
634	Submittal to DEQ	1 day	10/8/2007	10/8/2007		633
635	IRAM Implementation Technical Memorandum	56 days	10/8/2007	12/24/2007	0%	
636	Draft IRAM Implementation TM Preparation	40 days	10/8/2007	11/30/2007		612
637	PRP Group Review	10 days	12/3/2007	12/14/2007		636
638	Final IRAM Implementation TM	5 days	12/17/2007	12/21/2007		637
639	Submittal to DEQ	1 day	12/24/2007	12/24/2007		638
640	COMMUNITY RELATIONS ACTIVITIES	1196 days	4/30/2003	1/29/2008		167
641 642	PROJECT MANAGEMENT	4204	7/40/0000	4019410007		
		1381 days	7/10/2002	12/31/2007	4000/	1
643	Phase 1 PM	257 days	7/10/2002	7/15/2003	100%	
664	Phase 2 PM	164 days	4/30/2003	12/30/2003	100%	
687	2004 A PM	242 days	1/5/2004	12/16/2004	100%	
732	2005 PM	597 days	8/8/2003	12/31/2005	100%	
775	2006 PM	250 days	1/3/2006	12/29/2006	100%	
817	2007 PM	260 days	1/2/2007	12/31/2007	70%	
818	PRP Group Meetings	241 days	1/4/2007	12/6/2007		
830	DEQ Meetings	241 days	1/11/2007	12/13/2007		
837	Progress Reports	219 days	1/10/2007	11/12/2007		
844	Schedule/Budget Tracking	260 days	1/2/2007	12/31/2007		
845	Project Coordination	260 days	1/2/2007	12/31/2007		
846	DEMENIAL INVESTIGATION DEPOST DEPOST AND ATION	000 4	441401000	0/40/0000	0.001	
847	REMEDIAL INVESTIGATION REPORT PREPARATION	829 days	11/10/2004	2/18/2008	95%	CD0E01000 35
848	Rt Report Outline	300 days	11/10/2004	1/24/2006		689FS+208 days
849	RI Data Elements Compilation	90 days	2/24/2005	6/30/2005		848SS+70 days,204
850	Data Interpretation	75 days	7/5/2005	10/18/2005		849,120,296,331,204,5
851	Draft RI Report	150 days	10/19/2005	5/24/2006	100% 100%	
852 857	PRP Group Review Final Internal Draft Ri Report	41 days	5/25/2006	7/25/2006	100%	
858	PRP Group Review	140 days	7/26/2006 2/15/2007	2/14/2007	100%	
859	Draft Final Draft RI Report	30 days		3/28/2007 5/23/2007	100%	
860	Final PRP Group Review	40 days	3/29/2007 5/24/2007	6/13/2007	100%	
861	Final Draft RI Report	15 days 35 days	6/14/2007	8/1/2007	100%	
862	Final Final Draft PRP Group Review	10 days	8/2/2007	8/15/2007	100%	
863	Final Final Draft RI Report	23 days	8/2/2007 8/16/2007	9/17/2007	95%	
864	DEQ Review	60 edays	9/17/2007	11/16/2007	2570	863
865	Final RI Report	45 days	11/19/2007	1/18/2008		864
866	DEQ Approval	1 day	2/18/2008	2/18/2008		865FS+30 edays
867	en en entre la la la la compani	, uay	2, 10/2000	10/2000		230, 0.00 oddys
868	RISK ASSESSMENT	897 days	3/1/2004	9/17/2007		
869	HUMAN HEALTH RISK ASSESSMENT	589 days	5/19/2005	9/17/2007	100%	
870	Human Health Risk Assessment Work Plan	194 days	5/19/2005	2/28/2006		81,193,331,285
880	Risk Assessment Report	395 days	3/1/2006	9/17/2007	100%	,,,
			· · · · · · · · · · · ·		.00/0	

UPDATED SCHEDULE (9/12/07)

Remedial Investigation/Feasibility Study Astoria Area-Wide Petroleum Site Astoria, Oregon

ID	Task Description	Duration	Start	Finish	Complete	Predecessors
889	ECOLOGICAL EVALUATION	745 days	3/1/2004	2/15/2007	100%	
890	Level 1 Ecological Évaluation	185 days	3/1/2004	11/18/2004	100%	
899	Ecological Risk Assessment Work Plan Development	101 days	4/18/2005	9/9/2005	100%	
904	Level 2 Ecological Evaluation (REPLACED WITH ERA, below)	194 days	3/8/2004	12/11/2004	100%	
913	Ecological Risk Assessment	319 days	11/7/2005	2/15/2007	100%	
925		•				
926	FEASIBILITY STUDY	188 days	11/19/2007	8/6/2008	0%	
927	Feasibility Study Work Plan	75 days	11/19/2007	3/2/2008		
928	Establish Remedial Action Objectives	5 days	11/19/2007	11/23/2007		850,120,193,531,886,8
929	Identify General Response Actions	10 days	11/26/2007	12/7/2007		928
930	Determine Preliminary Remediation Goals	5 days	12/10/2007	12/14/2007		929
931	ID/Screen Remedial Technologies	10 days	12/17/2007	12/28/2007		930,919
932	Draft Feasibility Study Work Plan	10 days	12/31/2007	1/11/2008		931
933	PRP Group Review	10 days	1/14/2008	1/25/2008		932
934	Final Feasibility Study Work Plan	5 days	1/28/2008	2/1/2008		933
935	DEQ Review	30 edays	2/1/2008	3/2/2008		934
936	Feasibility Study Evaluation	40 days	3/3/2008	4/25/2008		
937	Assemble/Screen Remedial Alternatives	10 days	3/3/2008	3/14/2008		935
938	Detailed Analysis	15 days	3/17/2008	4/4/2008		937
939	Compare Remedial Alternatives	10 days	4/7/2008	4/18/2008		938
940	Recommend Preferred Alternative	5 days	4/21/2008	4/25/2008		939
941	Reporting	73 days	4/28/2008	8/6/2008		
942	Draft FS Report	15 days	4/28/2008	5/16/2008		940
943	PRP Group Review	10 days	5/19/2008	5/30/2008		942
944	Final Draft FS Report	10 days	6/2/2008	6/13/2008		943
945	Submittal to DEQ	1 day	6/16/2008	6/16/2008		944
946	DEQ Review	30 edays	6/16/2008	7/16/2008		945
947	Final FS Report	15 days	7/17/2008	8/6/2008		946
948						